# Notices

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, mechanical photocopying, recording or otherwise, without the prior written permission of the manufacturer.

The information within this manual is subject to change without notice.

The manufacturer shall not be held liable for technical or editorial errors or omissions contained in herein; nor for incidental or consequential damages resulting from the

furnishing, performance or use of this material.

Microsoft Windows is a registered trademark of the Microsoft Corporation.

Product names mentioned herein are for identification purposes only, and may be trademarks and/or registered trademarks of their respective companies.

## Macrovision Statement

**If your computer has a DVD drive and an analog TV Out port, the following paragraph applies:**

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

# Important Safety Information

## Safety Instructions

Your system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.

> Always follow these instructions to help guard against personal injury and damage to your system.

### Setting Up your System

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.

- Do not use this product near water or a heat source such as a radiator.

- Set up the system on a stable work surface.

- The product should be operated only with the type of power source indicated on the rating label.

- Ensure that the electrical outlet you are using to power your equipment is easily accessible in case of fire or short circuit.

- If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area.

- Openings in the computer case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the computer ventilation openings.

- Ensure that the fan vents on the bottom of the casing are clear at all times. Do not place the computer on a soft surface, doing so will block the bottom vents.

- If you use an extension cord with this system, make sure that the total ampere rating on the products plugged into the extension cord does not exceed the extension cord ampere rating.

## Care During Use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to not eat or drink near your system.
- Some products have a replaceable CMOS battery on the system board. There is a danger of explosion if the CMOS battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer. Dispose of batteries according to the manufacturer's instructions. If the CMOS battery requires replacement insure that a qualified technician performs the task
- When the computer is turned off, a small amount of electrical current still flows through the computer. To avoid electrical shock, always unplug all power cables, remove the battery and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
  - The power cord or plug is damaged.
  - Liquid has been spilled into the system.
  - The system does not operate properly when the operating instructions are followed.
  - The system was dropped or the casing is damaged.
  - The system performance changes.

## The Instruction On Safety Operation of NotePC

1. At installation and operation of devices it is necessary to carry out requirements of the user's guide.
2. Devices can be used only with the equipment specified in the technical specifications of the devices.
3. At operation of devices it is necessary to carry out the basic requirements
4. At occurrence of malfunctions in the device (a smell of burnt isolation, a smoke, etc.), it is necessary to disconnect the equipment from the power supply and to not to inserted back before reparation.
5. Service and reparation of devices should be carried out by experts of the manufacturer.

Technical director of the service center

## Replacement Parts and Accessories

Use only replacement parts and accessories recommended by manufacturer.

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

Do not use this product in areas classified as hazardous. Such areas include patient care areas of medical and dental facilities, oxygen rich environments, or industrial areas.

## Battery Disposal

Do not put rechargeable batteries or products powered by non-removable rechargeable batteries in the garbage.

Contact the Samsung Helpline for information on how to dispose of batteries that you cannot use or recharge any longer.

Follow all local regulations when disposing of old batteries.

## Laser Safety

All systems equipped with CD or DVD drives comply with the appropriate safety standards, including IEC 825. The laser devices in these components are classified as "Class 1 Laser Products" under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing, contact an authorized service location.

**Laser Safety Note:**
Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD or DVD drive.

## Power Cord Requirements

The power cord set (wall plug, cable and AC adapter plug) you received with your computer meets the requirements for use in the country where you purchased your equipment.

Power cord sets for use in other countries must meet the requirements of the country where you use the computer. For more information on power cord set requirements, contact your authorized dealer, reseller, or service provider.

## General Requirements

**The requirements listed below are applicable to all countries:**

- The length of the power cord set must be at least 6.00 feet (1.8m) and a maximum of 9.75 feet (3.0m).
- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.
- The power cord set must have a minimum current capacity of 7 A and a nominal voltage rating of 125 or 250 volts AC, as required by each country's power system.
- The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C7 connector, for mating with appliance inlet on the computer.

# Regulatory Compliance Statements

## Wireless Guidance

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your notebook system. The following section is a general overview of considerations while operating a wireless device.

Additional limitations, cautions, and concerns for specific countries are listed in the specific country sections (or country group sections). The wireless devices in your system are only qualified for use in the countries identified by the Radio Approval Marks on the system rating label. If the country you will be using the wireless device in, is not listed, please contact your local Radio Approval agency for requirements. Wireless devices are closely regulated and use may not be allowed.

The power output of the wireless device or devices that may be embedded in your notebook is well below the RF exposure limits as known at this time. Because the wireless devices (which may be embedded into your notebook) emit less energy than is allowed in radio frequency safety standards and recommendations, manufacturer believes these devices are safe for use. Regardless of the power levels, care should be taken to minimize human contact during normal operation.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on and transmitting.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter.

Some circumstances require restrictions on wireless devices. Examples of common restrictions are listed below:

Radio frequency wireless communication can interfere with equipment on commercial aircraft. Current aviation regulations require wireless devices to be turned off while traveling in an airplane. 802.11B (also known as wireless Ethernet or Wifi) and Bluetooth communication devices are examples of devices that provide wireless communication.

In environments where the risk of interference to other devices or services is harmful or perceived as harmful, the option to use a wireless device may be restricted or eliminated. Airports, Hospitals, and Oxygen or flammable gas laden atmospheres are limited examples where use of wireless devices may be restricted or eliminated. When in environments where you are uncertain of the sanction to use wireless devices, ask the applicable authority for authorization prior to use or turning on the wireless device.

Every country has different restrictions on the use of wireless devices. Since your system is equipped with a wireless device, when traveling between countries with your system, check with the local Radio Approval authorities prior to any move or trip for any restrictions on the use of a wireless device in the destination country.

If your system came equipped with an internal embedded wireless device, do not operate the wireless device unless all covers and shields are in place and the system is fully assembled.

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Please contact manufacturer for service.

Only use drivers approved for the country in which the device will be used. See the manufacturer System Restoration Kit, or contact manufacturer Technical Support for additional information.

### USA and Canada Safety Requirements and Notices

Do not touch or move antenna while the unit is transmitting or receiving.

Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.

Do not operate the radio or attempt to transmit data unless the antenna is connected; if not, the radio may be damaged.

**Use in specific environments:**

The use of wireless devices in hazardous locations is limited by the constraints posed by the safety directors of such environments.

The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).

The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.

**Antenna use:**

In order to comply with FCC RF exposure limits, low gain integrated antennas should be located at a minimum distance of 20 cm (8 inches) or more from the body of all persons.

High-gain, wall-mount, or mast-mount antennas are designed to be professionally installed and should be located at a minimum distance of 30 cm (12 inches) or more from the body of all persons. Please contact your professional installer, VAR, or antenna manufacturer for proper installation requirements.

**Explosive Device Proximity Warning**

Do not operate a portable transmitter (such as a wireless network device) near unshielded

blasting caps or in an explosive environment unless the device has been modified to be qualified for such use.

**Antenna Warning**

To comply with the FCC and ANSI C95.1 RF exposure limits, it is recommended for Intel® PRO/Wireless Network Connections installed in a desktop or portable computer, that the antenna for this device be installed so as to provide a separation distance of al least 20 cm (8 inches) from all persons and that the antenna must not be co-located or operating in conjunction with any other antenna or radio transmitter. It is

recommended that the user limit exposure time if the antenna is positioned closer than 20cm (8 inches).

**Use On Aircraft Caution**

Regulations of the FCC and FAA prohibit airborne operation of radio-frequency wireless devices because their signals could interfere with critical aircraft instruments.

**Other Wireless Devices**

**Safety Notices for Other Devices in the Wireless Network:** Refer to the documentation supplied with wireless Ethernet adapters or other devices in the wireless network.

The Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by Intel could void the user's authority to operate this device.

# Unintentional Emitter per FCC Part 15

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generate uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions may cause harmful interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet helpful: "Something About Interference." This is available at FCC local regional offices. Our company is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by our company. The correction will be the responsibility of the user. Use only shielded data cables with this system.

## Intentional emitter per FCC Part 15

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the United States of America if an FCC ID number is on the system label.

The FCC has set a general guideline of 20 cm (8 inches) separation between the device and the body, for use of a wireless device near the body (this does not include extremities). This device should be used more than 20 cm (8 inches) from the body when wireless devices are on. The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by the FCC.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter.

Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.



Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.



**FCC Statement for Wireless LAN use:**
"While installing and operating this transmitter and antenna combination the radio frequency exposure limit of 1mW/cm2 may be exceeded at distances close to the antenna installed. Therefore, the user must maintain a minimum distance of 20cm from the antenna at all times. This device can not be colocated with another transmitter and transmitting antenna."

## FCC Part 68

This equipment compiles with part of the FCC rules. On the back of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

This equipment uses the following USOC jacks : RJ11C

An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or promises wiring using a compatible modular jack which is Part 68 compliant. See Installation Instructions for details.

The REN is used to determine the quantity of devices which may be connected to telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by total RENs, contact the local telephone company to determine the maximum REN for the calling area.

If the terminal equipment causes harm to the telephone network, the Telephone Company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advanced notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment (Modem) for repair or warranty information, please contact your local distributor. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

The user must use the accessories and cables supplied by the manufacturer to get optimum performance from the product.

No repairs may be done by the customer.

This equipment cannot be used on public coin phone service provided by the telephone company. Connection to party line service is subject to state tariffs.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and

an identification of the business or other entity, or other individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be any number for which charges exceed local or long-distance transmission charges.)

In order to program this information into your fax machine, refer to your communications software user manual.

# Canada

## Unintentional Emitter per ICES-003

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limitesapplicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

## Intentional Emitter per RSS 210

Low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz Band, may be present (embedded) in your notebook system. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in Canada if an Industry Canada ID number is on the system label.

As a general guideline, a separation of 20 cm (8 inches) between the wireless device and the body, for use of a wireless device near the body (this does not include extremities) is typical. This device should be used more than 20 cm (8 inches) from the body when wireless devices are on.

The power output of the wireless device (or devices), which may be embedded in your notebook, is well below the RF exposure limits as set by Industry Canada.

This transmitter must not be collocated or operate in conjunction with any other antenna or transmitter.

Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

To prevent radio interference to licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Wireless devices are not user serviceable. Do not modify them in any way. Modification to a wireless device will void the authorization to use it. Contact manufacturer for service.

## Telecommunications per DOC notice
## (for products fitted with an IC-compliant modem)

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operation, and safety requirements. The Department does not guarantee the equipment will operate to the users' satisfaction.

Before installing this equipment, users should make sure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should make sure, for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

To avoid electrical shock or equipment malfunction do not attempt to make electrical ground connections by yourself. Contact the appropriate inspection authority or an electrician, as appropriate.

The **Ringer Equivalence Number** (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

# European Union

## European Union CE Marking and Compliance Notices

Products intended for sale within the European Union are marked with the Conformité Européene (CE) Marking, which indicates compliance with the applicable Directives and European standards and amendments identified below. This equipment also carries the Class 2 identifier.

The following information is only applicable to systems labeled with the CE mark $C\epsilon$.

## European Directives

This Information Technology Equipment has been tested and found to comply with the following European directives:

- EMC Directive 89/336/EEC with amending directives 92/31/EEC & 93/68/EEC as per
  - EN 55022 Class B
  - EN 61000-3-2
  - EN 61000-3-3
  - EN 55024
- Low Voltage Directive (Safety) 73/23/EEC as per EN 60950(A1/A2/A3/A4/A11)
- Radio and Telecom Terminal Equipment Directive 199/5/EC as per
  - CTR21 (if fitted with a modem device)
  - ETS 300 328 (if fitted with a 2.4 GHz band embedded wireless device)
  - ETS 301 489-1 (if fitted with a 2.4 GHz band embedded wireless device)
  - ETS 301 489-17 (if fitted with a 2.4 GHz band embedded wireless device)

## European Radio Approval Information (for products fitted with EU-approved radio devices)

This Product is a Notebook computer; low power, Radio LAN type devices (radio frequency (RF) wireless communication devices), operating in the 2.4 GHz band, may be present (embedded) in your notebook system which is intended for home or office use. This section is only applicable if these devices are present. Refer to the system label to verify the presence of wireless devices.

Wireless devices that may be in your system are only qualified for use in the European Union or associated areas if a CE mark $C\epsilon$ with a Notified Body Registration Number and the Alert Symbol is on the system label.

The power output of the wireless device or devices that may be embedded in you notebook is well below the RF exposure limits as set by the European Commission through the R&TTE directive.



See 802.11b and 802.11g restrictions for specific countries or regions within countries under the heading "European Economic Area Restrictions" below.

**Translated Statements of Compliance**

This product follows the provisions of the European Directive 1999/5/EC.

**European Economic Area Restrictions**

**Local Restriction of 802.11b/802.11g Radio Usage**

[Note to integrator: The following statements on local restrictions must be published in all end-user documentation provided with the system or product incorporating the Intel PRO/Wireless 2200BG Network Connection product.]



Due to the fact that the frequencies used by 802.11b/802.11g wireless LAN devices may not yet be harmonized in all countries, 802.11b/802.11g products are designed for use only in specific countries or regions, and are not allowed to be operated in countries or regions other than those of designated use.

As a user of these products, you are responsible for ensuring that the products are used only in the countries or regions for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country or region of use. Any deviation from permissible settings and restrictions in the country or region of use could be an infringement of local law and may be punished as such.

The European variant is intended for use throughout the European Economic Area. However, authorization for use is further restricted in particular countries or regions within countries, as follows:

**General**

European standards dictate maximum radiated transmit power of 100 mW effective isotropic radiated power (EIRP) and the frequency range 2400 – 2483.5 MHz.

**Belgium**

The product may be used outdoors, but for outdoor transmissions over a distance of 300m or more, a license from the BIPT is required.

This restriction should be indicated in the manual as follows:

Dans le cas d'une utilisation privée, à l'extérieur d'un bâtiment, au-dessus d'un espace public, aucun enregistrement n'est nécessaire pour une distance de moins de 300m. Pour une distance supérieure à 300m un enregistrement auprès de l'IBPT est requise. Pour une utilisation publique à l'extérieur de bâtiments, une licence de l'IBPT est requise. Pour les enregistrements et licences, veuillez contacter l'IBPT.

**France**

For Metropolitan departments:

2.400 - 2.4835 GHz for indoor use.

2.400 -2.454 GHz (channels 1 to 7) for outdoor use.

For Guadeloupe, Martinique, St Pierre et Miquelon, Mayotte:

2.400 - 2.4835 GHz for indoor and outdoor use.

For Reunion, Guyane:

2.400 - 2.4835 GHz for indoor use.

2.420 - 2.4835 GHz for outdoor use (channels 5 to 13)

## European Telecommunication Information
## (for products fitted with EU-approved modems)

Marking by the symbol $C\epsilon$ indicates compliance of this equipment to the Radio and Telecom Terminal Equipment Directive 1999/5/EC. Such marking is indicative that this equipment meets or exceeds the following technical standards:

CTR 21 – Attachment requirements for pan-European approval for connection to the analogue Public Switched Telephone Networks (PSTNs) of TE (excluding TE supporting voice telephony services) in which network addressing, if provided, is by means of Dual Tone Multi-Frequency (DTMF) signaling.



Although this equipment can use either loop disconnect (pulse) or DTMF (tone) signaling, only the performance of the DTMF signaling is subject to regulatory requirements for correct operation. It is therefore strongly recommended that the equipment is set to use DTMF signaling for access to

public or private emergency services. DTMF signaling also provides faster call setup.

This equipment has been approved to Council Decision 98/482/EEC—"CTR 21" for Pan-European single terminal connection to the Public Switched Telephone Network (PSTN).

However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point. In the event of problems, you should contact manufacturer Technical Support.

# WEEE SYMBOL INFORMATION

## Correct Disposal of This Product
## (Waste Electrical & Electronic Equipment)

**(Applicable in the European Union and other European countries with separate collection systems)**

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

# Using Your Documentation

Congratulations on your purchase of a notebook computer with the Windows® XP operating system. Whether you are new to using a portable computer or are an experienced user, this user's manual can help you get the most from your computer.

## Manual Documentation Conventions

### Information Icons

Three icons and their associated messages appear in this manual. The information icons are placed before the step/information they apply to:

**Warning:**
Indicates the possibility of personal injury.

**Caution:**
Warns you of possible damage to equipment or data.

**Note:**
Informs you of special circumstances.

**Technical Information:**
Informs you of special requirements or limitations for use of item(s).

### Keyboard Conventions

Keys that you need to press to perform certain functions are displayed in the manual in brackets. For example:

**<Ctrl>** indicates the control key (**Ctrl** on the keyboard).

If you need to press two keys at the same time, the key names are shown joined by a plus sign. For example:

**<Fn+F8>** means that you should press the **Fn** key and hold it and then press the **F8** key.

## CD-ROM Device Naming Convention

In many installation programs you will have to get a program from the CD-ROM device. The program installation sequence assumes that the CD is drive d:\, however this is not always the case. The name of the CD-ROM drive is the letter following the letter assigned to your last HDD. For instance, if you have one HDD with two partitions, the HDD is drives C: and D: and the CD-ROM drive is then drive E.

## Touchpad Conventions

You may be asked to click or double-click on items on the display screen. As a general note the touchpad actions act much in the same way as a wheel mouse, any differences are explained fully.

The object that needs to be clicked upon will be displayed in **Bold** text or shown in a small figure such as the **"Start Button"** shown on the right =>. 

*Table 1.  Touchpad Click Conventions*

| Action | Process |
|--------|---------|
| **Click** | Depress the touchpad left button and release |
| **Double-click** | Quickly click the left touchpad button two times |



**Windows Conventions:**
Almost all "Windows" programs will display the name/function of a button or icon if you place the touchpad pointer on the item you want information about.

# Software User Documentation

Your computer is shipped from the factory with several software programs installed. The software may include its own online or printed documentation. Refer to the documentation or the Help options in the software for more information.



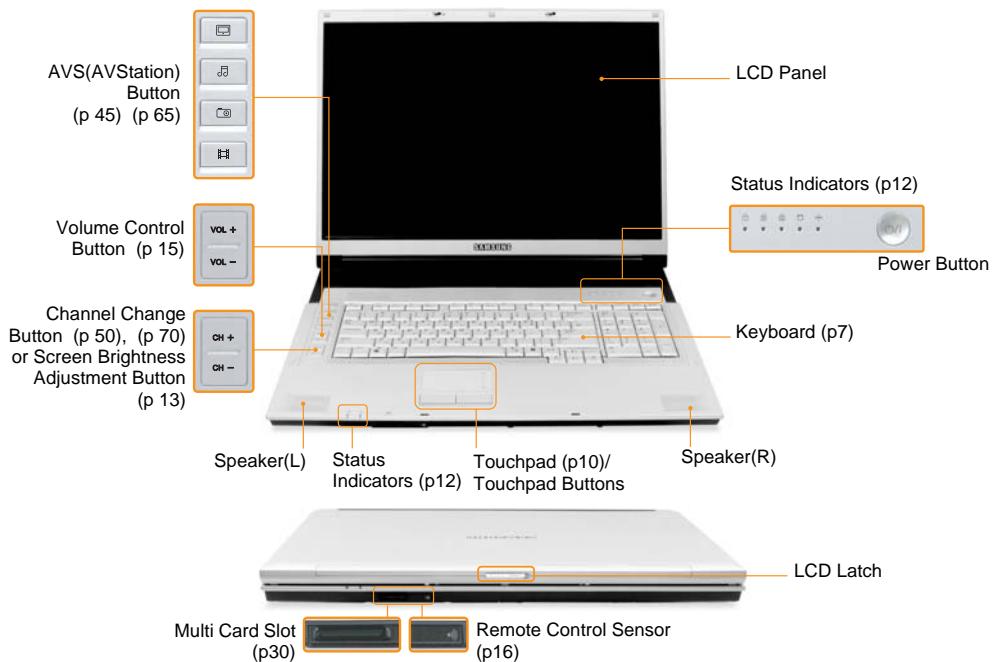The figures and illustrations in this manual may not be identical to those on your system.



**General Icon Note:**
Some of the Icons used in Windows XP may be placed on the taskbar by selecting **(ex: Place the volume icon in the taskbar)** in the properties dialog box.
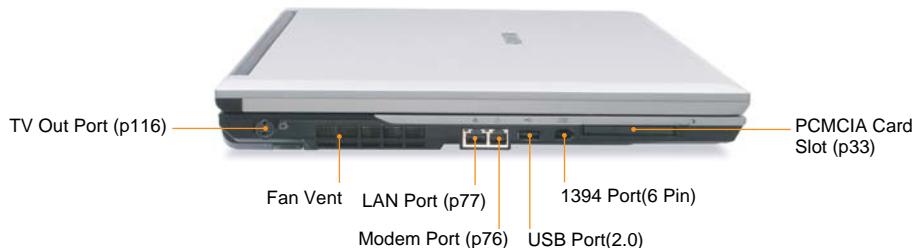
# Getting Started

## Introducing Your Computer

### Front View



AVS(AVStation) Button (p 45) (p 65)

LCD Panel

Status Indicators (p12)

Volume Control Button (p 15)

Power Button

Channel Change Button (p 50), (p 70) or Screen Brightness Adjustment Button (p 13)

Keyboard (p7)

Speaker(L)

Status Indicators (p12)

Touchpad (p10)/ Touchpad Buttons

Speaker(R)

LCD Latch

Multi Card Slot (p30)

Remote Control Sensor (p16)

For models without the TV feature, the first AVS button is provided with button. Pressing the button displays the start screen of **AVStation now**. (p 65)

In addition, a **Screen Brightness Adjustment Button** is provided instead of a **Channel Change Button**. (p 13)
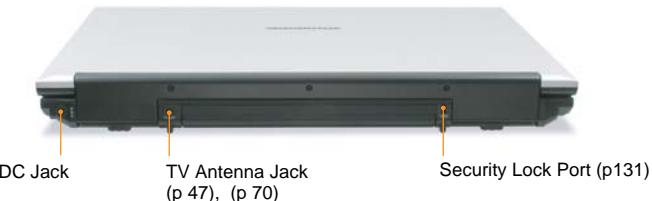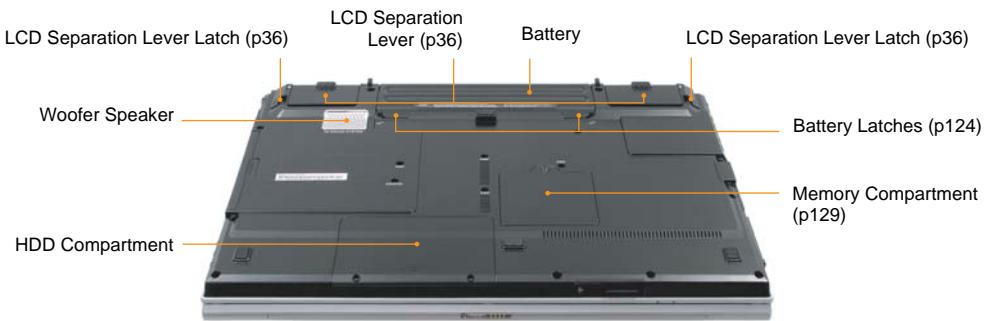
## Right View

Headphone Jack / S/PDIF Jack

Microphone Jack

Line In Jack

USB Port(2.0)

DVD Super Multi Drive (p22)

USB Port(2.0)

Monitor Port

AV In Port
(p 52),  (p 70)

## Left View

TV Out Port (p116)

Fan Vent

Modem Port (p76)

LAN Port (p77)

USB Port(2.0)

1394 Port(6 Pin)

PCMCIA Card
Slot (p33)

## Back View



DC Jack      TV Antenna Jack (p 47), (p 70)      Security Lock Port (p131)

## Bottom View



LCD Separation Lever Latch (p36)

LCD Separation Lever (p36)

Battery

LCD Separation Lever Latch (p36)

Woofer Speaker

Battery Latches (p124)

Memory Compartment (p129)

HDD Compartment

Removing or disassembling the hard disk drive will void your warranty. To replace the hard disk drive, please contact your nearest Samsung Service Centre.

# Turning the Computer On and Off

## To turn on the computer

1. Insert the battery and connect the AC adapter according to the Installation Guide.
2. Slide the LCD latch to the right and open the LCD panel.
3. Press the power button.



## To turn off the computer

1. Click the **start** button ( start ) on the taskbar.
2. Click **Turn Off Computer**.



3. Click **Turn Off**.



> If the computer has not turned off properly due to a system error, press **<Ctrl>+<Alt>+<Delete>**. When [Windows Task Manager] dialog box appears, click **Shut Down > Turn Off** to turn off the computer. Your unsaved work may be lost/damaged.

> If **<Ctrl>+<Alt>+<Delete>** keys do not operate either, press the power button for more than 4 seconds to turn off the computer. Your unsaved work may be lost/damaged. The next time you turn on your computer, a hard disk check will be performed, before Windows starts.
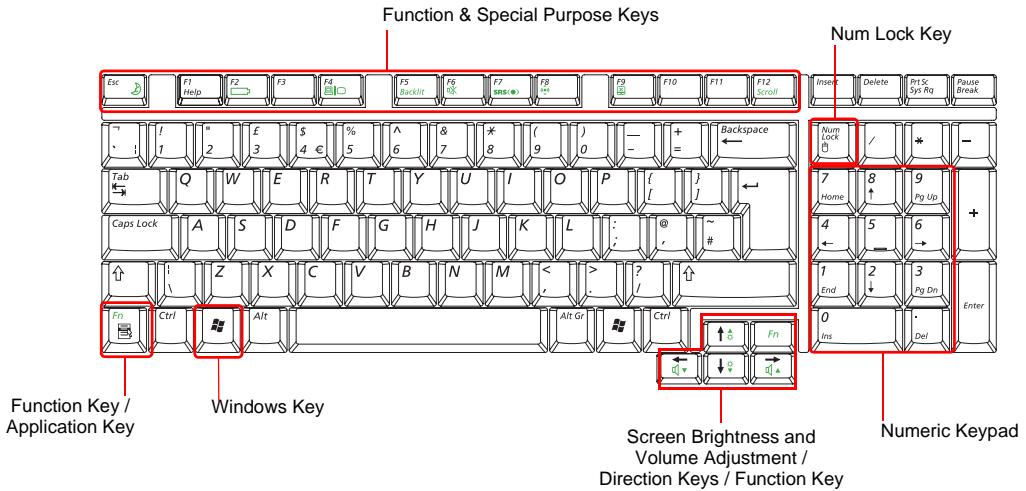
# Using the Keyboard

Your computer has an 100(or 101)-key keyboard. By pressing designated key combinations, you can have access to all the key functions of a full-sized keyboard.
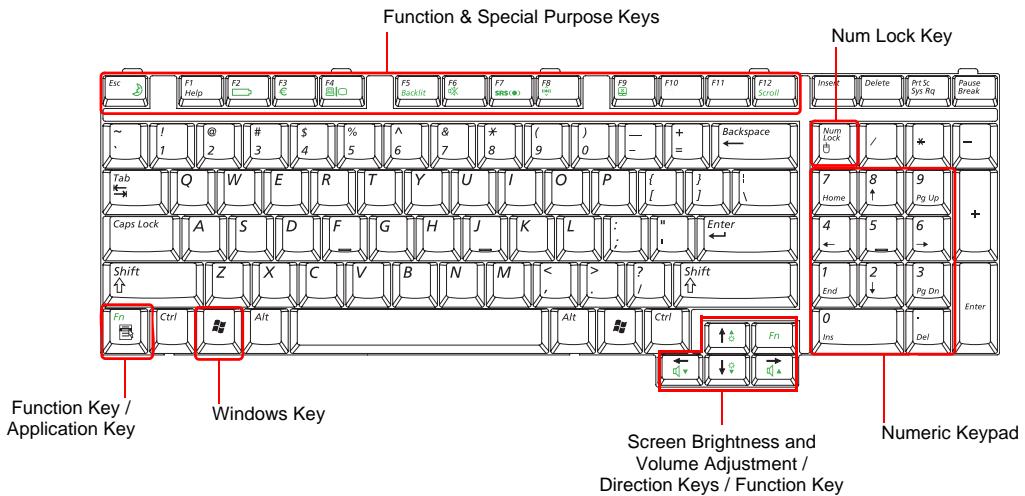
The keyboard is supplied according to the corresponding country. Refer to the keyboard figure for the corresponding country.

**<United Kingdom>**

Function & Special Purpose Keys

Num Lock Key



Function Key / Application Key

Windows Key

Screen Brightness and Volume Adjustment / Direction Keys / Function Key

Numeric Keypad

Although the layout of the keys on your computer's keyboard is different from that on a desktop computer's keyboard, the keyboard feels like a full-sized keyboard when you use it.

**<United States>**

Function & Special Purpose Keys

Num Lock Key



Function Key / Application Key

Windows Key

Screen Brightness and Volume Adjustment / Direction Keys / Function Key

Numeric Keypad

**The keys on the keyboard can be grouped into the following categories:**

- Full-sized Alphanumeric typewriter keys are arranged like a standard typewriter keyboard and are used for text entry. The Windows keys on either side of the spacebar open Windows menus and perform other special functions.

- Function keys, when pressed together with the **<Fn>** key, enable special functions.

- Cursor and Screen control keys move the cursor. They may perform other functions, depending on your software.

To clean the computer keyboard, use slightly damp cotton swabs. Scrub the keys and the surface around the keys.

Do not allow liquid to drip into the keyboard or you may damage the keyboard.

## Using the Numeric Keypad

When pressing the [Num Lock] key, the **Num Lock LED** turns on and the numeric keys on the keyboard can be used.

## Using Special Function Keys

The function key activates special functions when it is pressed in combination with another keys.

| <Fn> Key Combinations | Key Name | Key Function |
|---|---|---|
| <Esc/ ☽ > | Standby | Puts the computer into standby mode. To resume from suspended mode, press the power button. (p119). |
| <F2/ ▭ > | Gauge | Shows the remaining battery charge. |
| <F4/ ▣▢ > | LCD/CRT | Switches the display between the LCD and external display device when an external display device is connected. (p116) |
| <F5/Backlit> | Backlight | Turns the LCD on and off. |
| <F6/Mute> | Mute | Turns the audio output on and off. |
| <F7/ SRS> | SRS | This feature enables you to experience more stereophonic sound. You can select one of the following modes by pressing the button.<br><br>Note. **WOW XT ON** Mode: Select to listen to music.<br>**Trusurround ON** Mode: Select to watch a movie.<br>**SRS OFF** Mode: Switches off the SRS function.<br><br>The SRS function is only supported through the built-in speaker of the computer and the headphones. It is not supported through the S/PDIF port. |
| <F8/ ((•)) > | Wireless LAN On/Off | Turns the wireless LAN service on and off for models with wireless LAN installed. |
| <F9/ ⊠ > | Touchpad | Turns the touchpad function on and off. |
| <F10/ 🐾 > | Etiquette Mode | You can select Etiquette Mode when you need a tranquil work environment. |
| <F12/Scroll> | Scroll Lock | Scrolls the screen up and down while the cursor position does not change in some applications. |
| < ← / ◁▼ > | Volume Down | Decreases the audio volume. |
| < → / ◁▲ > | Volume Up | Increases the audio volume. |
| < ↑ / ☼▲ > | Brightness Up | Makes the LCD screen brighter. |
| < ↓ / ☼▼ > | Brightness Down | Makes the LCD screen dimmer. |

When you press a function key combination, the system sound may be temporarily muted.

# Using the Touchpad

In Windows, you always see a small graphical image on the screen that indicates the location where you can take the next action. This image is called a pointer, and is usually displayed in arrow shape ( ▷ ) or 'I' shape ( Ⅰ ).

Touchpad
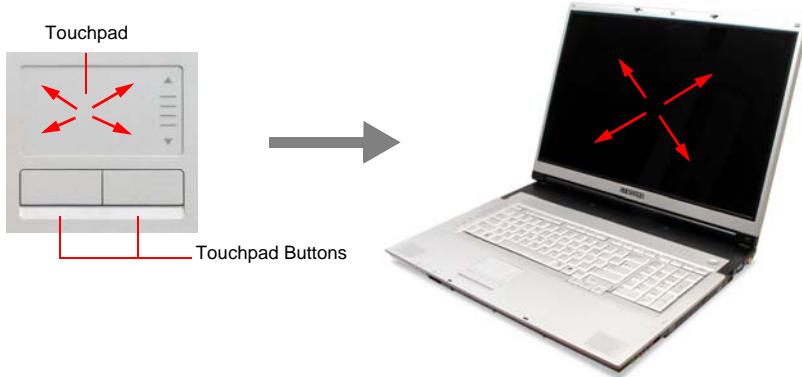
Touchpad Buttons

The touchpad on your computer allows you to move the pointer on the LCD screen, just like a mouse that is used with a desktop computer. The touchpad buttons allow you to take actions with the pointer, such as selecting an item or executing a command.

**Locking the touchpad**

You can lock the touchpad and use only the keyboard and mouse. To lock the touchpad function, press the **<Fn>+<F9>** key combination.

You can perform various actions with your touchpad as described below.

| Action | Function | Process |
|--------|----------|---------|
| **Move** | Move the pointer | Place your finger on the touchpad and slide your finger to a destination. |

| Action | Function | Process |
|---|---|---|
| **Click** | Select an object, open a menu, or execute a button | Place the pointer over an object, then press left touchpad button once.<br><br>Or, place the pointer over an object, then tap the touchpad once with your finger. |
| **Double-Click** | Launch a program or open a file | Place the pointer over an object, then quickly press left touchpad button twice.<br><br>Or, place the pointer over an object, then quickly tap the touchpad twice with your finger. |
| **Right-Click** | Display a short cut menu | Place the pointer over an object, then press right touchpad button once. |
| **Drag** | Move an object, or select an area or multiple objects | Drag and drop a part to the required place. |
| **Scroll** | Display upper/lower/left/right part of the content within a window<br><br>(Applicable to certain programs only) | Place your finger on the right edge or bottom edge of the touchpad and move vertically or horizontally. |

Please use the touchpad only with your finger. Using sharp devices may damage the touchpad.

Operating the touchpad or touchpad button while starting your system may increase the time required for starting Windows.

# Reading the Status Indicators

Shows the operating status of the computer.

| | | |
|---|---|---|
| ⬒1 | **Num Lock** | Turns on when the numeric keypad is activated. |
| Ⓐ | **Caps Lock** | Turns on when all alphabet characters you type will be in upper case. |
| ⬓ | **Scroll Lock** | Turns on when it is set to scroll the screen up and down while the cursor position does not change in some applications. |
| 🗄 | **Hard Disk Drive / CD-ROM Drive** | Blinks when the hard disk drive or CD-ROM drive is in operation. |
| ((●)) | **Wireless LAN** | Turns on when wireless LAN function is enabled. (This light does not operate for the models without wireless LAN.) |
| ±⊝ | **Battery** | Turned blue - when the battery is fully charged, or when the battery is not installed.<br>Turns amber - when the battery is being charged.<br>Blinks - when the battery is not properly installed. |
| ☼ | **Power** | Turned On - when the computer is turned on.<br>Blinks - when the computer is in Standby mode. |

# Adjusting LCD Brightness

There are 8 levels of LCD brightness (1: Dimmest ~ 8: Brightest).

## To adjust using keyboard

Press <**Fn**>+< ☼▼ > or <**Fn**>+< ☼▲ > keys from the keyboard to adjust LCD brightness.

For models without the TV feature, use the **Screen Brightness Adjust Button** ( ☼+ ☼- ).

Whenever you turn the system on or change the power source the brightness level changes according to the settings.

- when operating on AC power:       Brightness Level 8
- when operating on battery power:   Brightness Level 3

## Adjusting the brightness using the Battery Manager

You can adjust the screen brightness using the Battery Manager. (p127)

> **Maintaining your LCD brightness settings after turning the system off and on**
> 1. Turn the system on. When the Samsung Logo appears, press the <F2> key to enter Setup.
>
> 2. In the **Boot** menu, change the **Brightness Control Mode** option to **User Control**.
>
> 3. Save the settings and exit Setup.
>
> - When using the Battery Manager, only the screen brightness set in 'Customized Mode' is maintained.
>
>
> **To save the battery charge**
> When your computer is operating on battery power, adjusting the LCD brightness level to dimmer diminishes the battery power consumption.

**Bad pixels in the LCD**

The limits of the LCD manufacturing technology allow a maximum of 10 abnormal or bad pixels, which do not affect system performance. This system may have the same level of abnormal or bad pixels as any other company's products.

**Maintenance Instructions**

When cleaning the LCD panel, use only computer specific cleaners on a soft cloth, and lightly wipe in one direction.

## Adjusting the Volume using the Volume Control Button

Adjust the volume by using the **Volume Control Button** (  ).

## To adjust using keyboard

Press **<Fn>**+< ◁▼ > or **<Fn>**+< ◁▲ > from the keyboard.

## To adjust using volume adjustment program

Click the **Volume** icon(  ) on the taskbar, and move the Volume slider to a desired level.



For advanced volume control options, double-click the **Volume** icon(  ), and adjust the volume level in the volume control program.
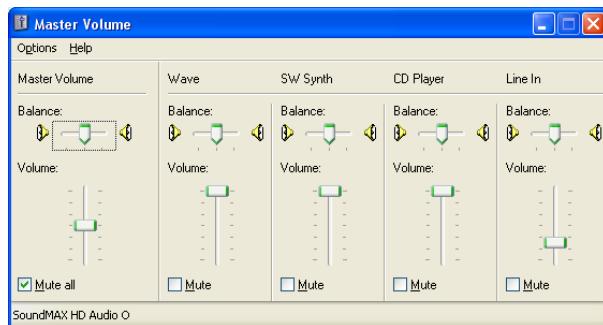


When you turn the system on, a booting noise may occur.

# Using the Remote Control (Optional)

Using the remote control for the computer is described below. To use the remote control, install the supplied battery into the remote control first.

## Installing Battery

Move the groove (( ◀ )) on the cover to the ( ● ) position by using a coin and open the battery cover. (To open the cover, turn it counterclockwise.)

.
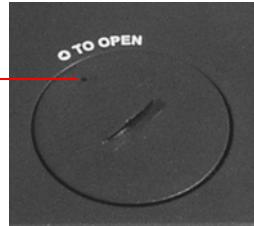
Insert the battery so that the **positive pole (+)** of the battery is towards the inside of the cover

Move the groove (( ◀ )) on the cover to the  ● position by using a coin and open the battery cover by turning it clockwise.

## Remote Control Buttons

**Remote Control Signal Transmitter**

**Power / Standby Button**
Press to turn the computer on or to enter Hibernation.

**AVS Button**
- When the computer is turned off or in Hibernation status, **AVStation now** is launched. (p65)
- When the computer is turned on, **AVStation premium** is launched.(p45)

**Playback Control Button**

**Direction Button***
Press to move to an item.

**ENTER Button**
Press to execute the selected item.

**BACK Button***
Press to return to the previous step.

**Volume Control Button**

**MUTE Button**
Press to mute the sound.

Buttons indicated by (*) do not work in some applications.

When pressing the **Power / Standby Button** in Windows, the computer enters Standby mode. The computer will not shut down.

## Remote Control Operating Range

The valid distance for the remote control is determined by the user environment. It is recommended to use the remote control within 3 meters and a 45 degree angle from the remote control sensor on the device.

When the remote control is not being used, keep the remote control in the PCMCIA slot. To keep the remote control in the slot, insert the remote control into the slot so that the Remote Control Signal Transmitter faces outward.
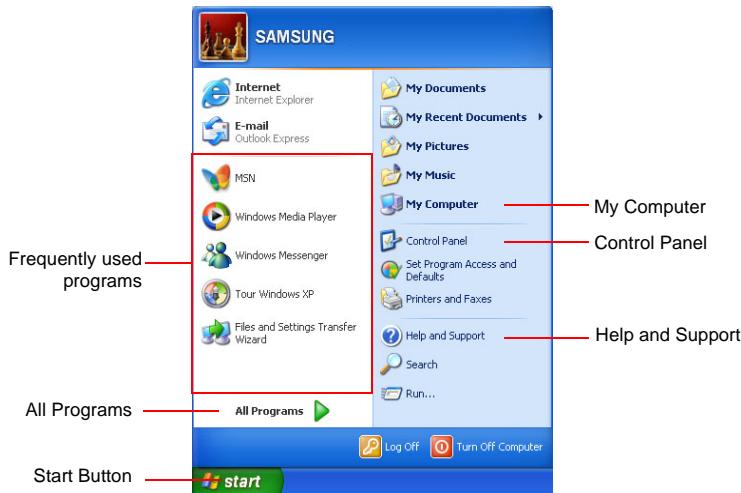
# Introducing Windows

## Understanding the Desktop

The desktop is the working area on the computer. It consists of the large workspace and a taskbar at the bottom.

Shortcut Icons

Start Menu

Start Button

Taskbar

Recycle Bin

Language Bar

System Tray with Clock
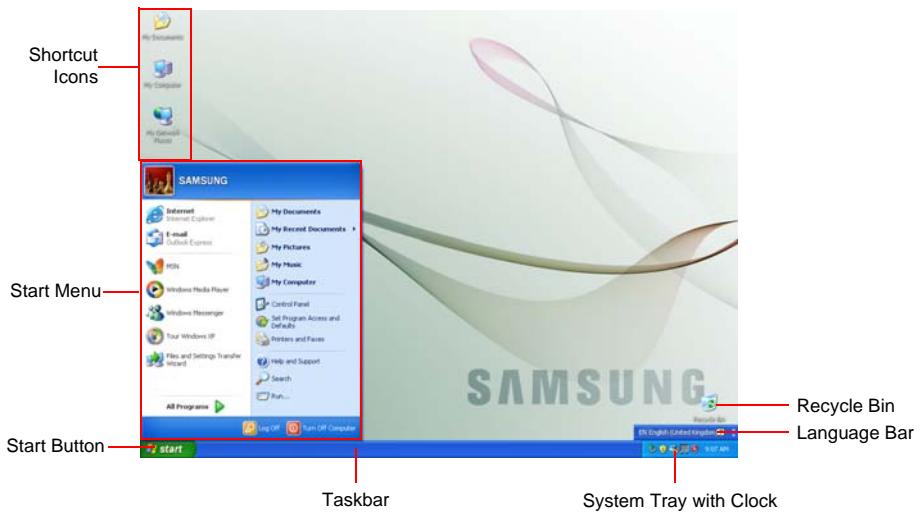
| | | |
|---|---|---|
| **Start Button** | start | Opens the Start menu. |
| **Taskbar** | | Displays programs that are currently running. Frequently used icons can be placed here. |
| **Recycle Bin** | | Deleted files or folders are sent here. |
| **Language Bar** | EN English (United Kingdom) | Switches text input language. |

# Understanding the Start Menu

The Start menu includes everything that is required to start Windows. From the Start menu it is possible to run a program, open a file, assign system users with Control Panel, receive support by clicking Help and Support, and search desired items from the computer or Internet by clicking Search.



| My Computer | | Displays the contents of the hard disk, the CD-ROM drive, the network drive(s), and floppy disks. It can also be used to search and open files and folders. |
|---|---|---|
| Control Panel | | Enables users to configure settings on the computer. |
| Help and Support | | Provides on-line help, information on Windows and troubleshooting. |
| Search | | Enables users to search for information in files or the Internet. |
| Run | | Run programs or documents. |

# Understanding a Window

A window is the basic component in working with the computer. The My Computer window, which is a window for the computer's hard drive, will be used as an example here to show the basic composition of a window.

Click **Start > My Computer**.
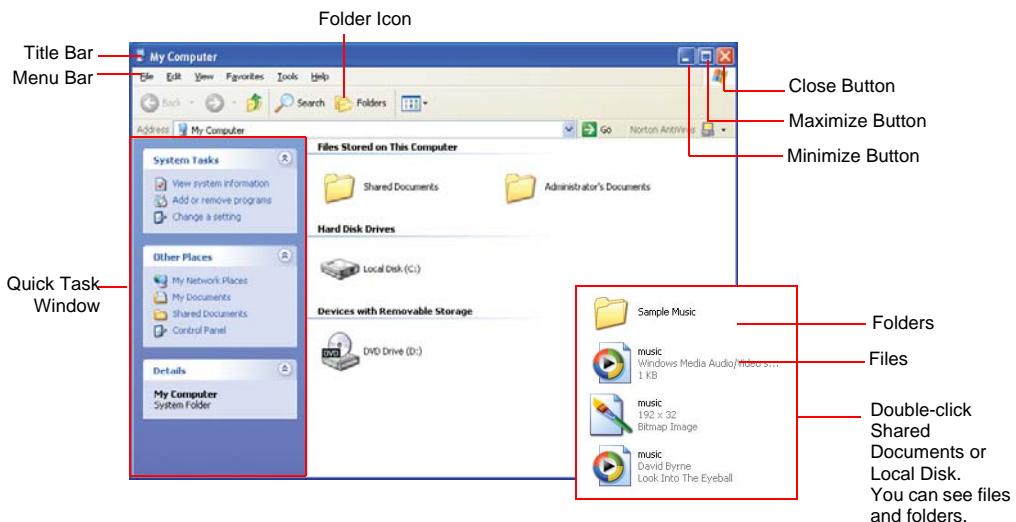


Double-click the hard drive (local disk) to view internal folders and files stored in it. If the contents do not appear, click **Show the contents of this folder**.

**What is a drive?**
A storage device in which files and folders are saved in, and read from.

**What is a folder?**
A folder is used to group and manage files systematically, and may include files in sub-folders. It is similar to a bookshelf.

**What is a file?**
A file is a document or various kinds of material that is generated as a result of program operation. It is also called data.

**To view the entire structure of the drive**
Click the Folder icon in the taskbar to view the entire structure. Click again to return to the Quick Task Window.

# Help and Support Center

Help and Support Center provides references and troubleshooting information regarding computer use.

Click **Start > Help and Support**.

Please refer to help and support centre before calling the Samsung helpline.

# Windows XP Tour

You can tour elementary functions provided by Windows XP.

Click **Start > Tour Windows XP**.

Or click **Start > All Programs > Accessories > Tour Windows XP**.

Click on the topics to find out about important functions of Windows XP.

# Using the Computer

This computer is supplied with a DVD Super Multi drive.

## Using the CD Drive

**DVD Super Multi Drive**
Reads CD/DVDs and writes data to CD/DVDs. Supported DVD types include DVD ± R, DVD ± RW and DVD-RAM.

### To insert a CD

1. Press the eject button on right side of the CD drive.
2. When the tray slides out, place a CD onto the tray with the label facing up, and push the CD down until it clicks.



Emergency Eject Hole

Eject Button

CD Access LED

3. Push the tray in gently until it clicks.

## To eject a CD

1. Stop any process that accesses the CD drive and ensure the CD access LED is turned off.
2. Press the eject button on right side of the CD drive.
3. When the tray slides out, remove the CD from the tray.
4. Push the tray in gently until it clicks.

If you remove the CD when the CD access LED is on, the disk and the data in it may be damaged.

**Emergency Eject Hole**
To eject a CD when the CD drive is not working or the computer is turned off, unfold a paperclip, and insert the unfolded end of the clip into the emergency eject hole (located next to the eject button) and press until the CD tray opens.

**To clean a CD or DVD title**
Clean the disc with a soft clean cloth by wiping from the center outwards.

**To play a DVD**
You have to install the DVD software provided on a separate CD to view a DVD title.

## To use the Windows Media Player

Window Media Player enables you to play and manage audio and video files.

To launch the Windows Media Player, click **Start > All Programs > Accessories > Entertainment > Windows Media Player**.

Running the program the first time displays the set up screen. Define the settings according to the instructions displayed on the screen.

When you complete the settings, the following screen appears.



Features

Playlist

Playback Control Area
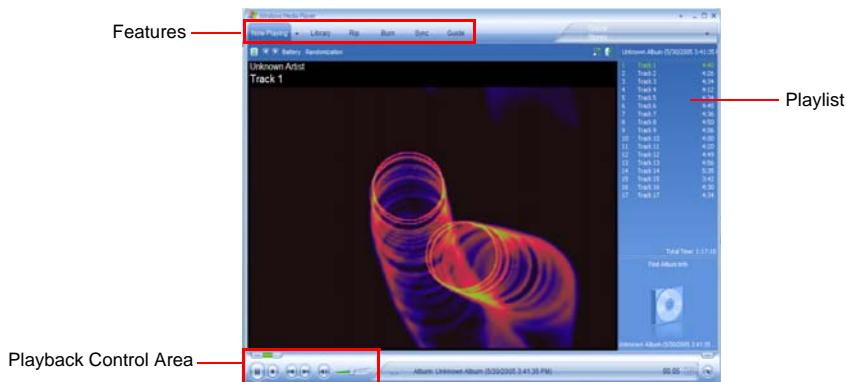
> **To view detailed information on how to use Windows Media Player**
>
> Run Windows Media Player and right-click over the Function Taskbar and select **Help > Windows Media Player Help**.

## To play a video CD

If a video CD does not run automatically, follow these steps.

1. Insert a video CD into the CD drive.
2. When the CD drive window appears, double-click the MPEGAV folder.
3. Double-click the .dat file.
4. When the [Caution] dialog appears, click **Open With**.
5. Select "Select the program from a list" and click **OK**.
6. Select the **Windows Media Player**, and click **OK**. The video starts playing.

Above procedure applies only to the video CDs that has a .dat file as the execution file. Playing procedure may be different according to video CDs.

## To write data on a CD (Option)

If your computer has CD-RW functionality, you can copy data to a blank CD or create an audio CD.

An additional CD writing program is supplied in an additional CD.

You cannot write to a CD that already has data in it.

1. Insert a blank CD into the CD drive.
2. On the [CD Drive] dialog, select **Open Writable CD Folder** and click **OK**. The CD drive window appears.
3. Click **Start > My Computer**.

**4.** In My Computer window, select files and folders to copy, then drag and drop them onto the CD drive window.

My Computer window



CD drive window

4. Drag and drop folders or files to copy.

5. Click **Write these files to CD**.
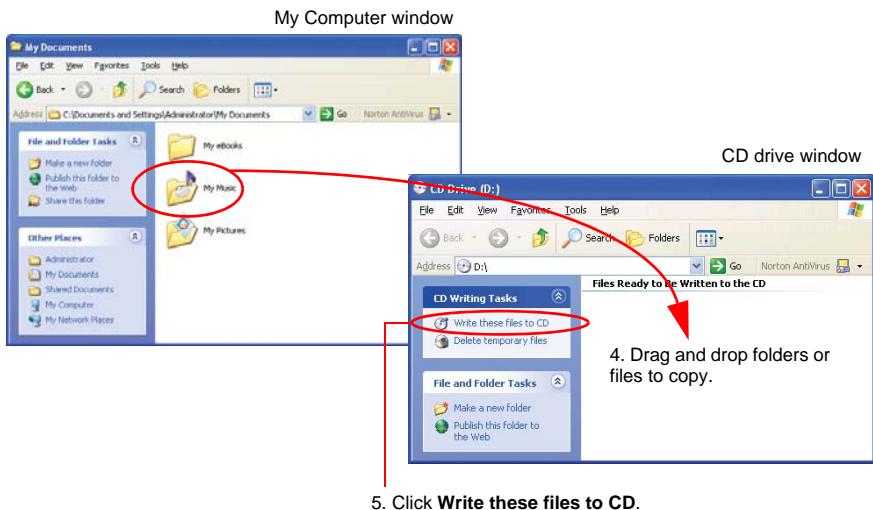
**5.** Click **Write these files to CD** in the CD drive window.

**6.** When the CD Writing Wizard appears, enter the CD label, and click **Next**. The data begins copying.

**7.** When copying is completed, a 'completed' message appears and the CD drive window opens automatically.

**For more information on writing CDs**
Click **Start > Help and Support**. Type "CD copy" in the search field, and click the **Search** icon ( ).

**To Burn an Audio CD**

Run Windows Media Player and right-click over the Function Taskbar and select **Help > Windows Media Player Help**.

Select **Using the Player > Using CDs, DVDs and VCDs > Using CDs > Burning your own CDs > To burn your own CD** to see detailed information.

# Enjoying Home Theater (S/PDIF Port)

Your computer supports 5.1 channel output, which is a basic function for home theater systems, and DVD drives. It provides 3D surrounding sound and vivid screen.

**What is a home theater system?**
Home theater system usually consists of a TV, DVD, 5.1 channel speaker, and digital amp and provides a high-resolution screen (MPEG2) and 3D surrounding sound (Dolby 5.1 or DTS). With a home theater system, you can enjoy a vivid screen and sound in your home as if you are in a movie theater.

The following devices are required to enjoy a home theater system.

| | |
|---|---|
| 5.1 channel speaker system (amplifier, speakers, connection cables) | Purchased separately |
| DVD drive and DVD playing program on the computer | Optional |
| DVD title that supports 5.1 channel | Purchased separately |

To use home theater system, complete the following procedures:

- Step 1. Connect 5.1 channel speaker system to your computer.
- Step 2. Configure digital sound output on the computer.
- Step 3. Enable S/PDIF output on the DVD program.

## Step 1. Connect 5.1 channel speaker system to your computer

1. Connect the S/PDIF jack of the system and a 5.1 channel amplifier.

2. Connect speakers to the amplifier. (Refer to speaker's manual.

3. To view through a TV, connect the TV and change the current display device to TV in the Display Properties. ( "Using External Display Devices" on page 116.)
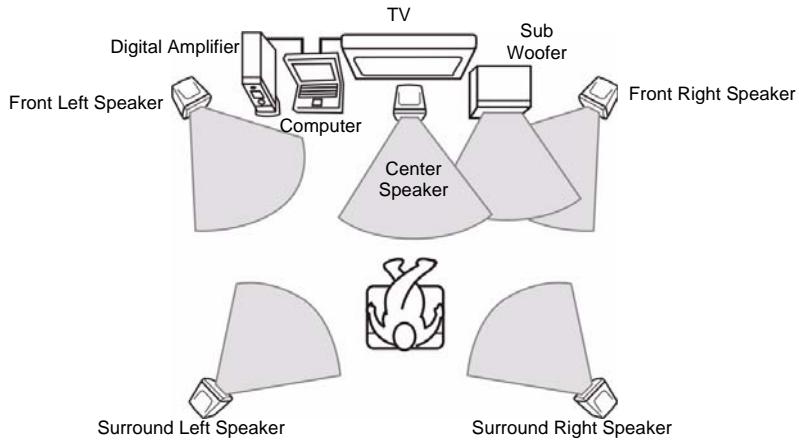


## Step 2. Setting the Sound to Digital Sound Output on the Computer

Since the sound of the computer is set to Digital Output by default when purchasing the computer, additional settings are not required. You can confirm the setting as follows.

1. Double-click the Volume Control ( ) icon in the notification area of the Taskbar and select **Options > Advanced Controls**.

2. Click the **Advanced** button below the Master Volume and check if the **1 Disable Digital Output** item is unselected.
The option must be unselected for sound to be output in digital format.

## Step 3. Enable S/PDIF output on the DVD program

To use 5.1 channel speakers, you need to install the Power DVD program from the Power DVD Installation CD provided with your computer, then change the settings as per the following.

1. Run Power DVD program and click the **Settings** icon ( ).



2. On the **Audio** tab, set the Audio Output setting to "Use SPDIF" and click **OK**.
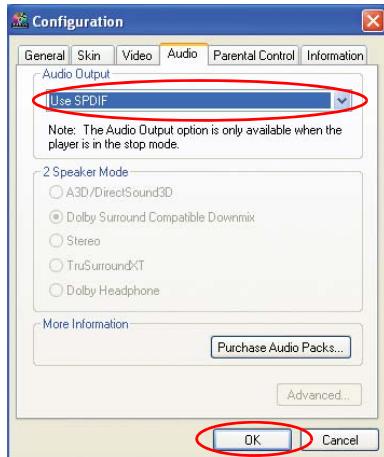


Now, you can enjoy home theater using DVD titles.

 To control volume for your 5.1 channel speaker, use the control on the digital amp. (Please refer to the speaker manual.)

# Using the Multi Card Slot

Using the Multi Card Slot, you can use memory cards such as a Memory Stick, Memory Stick Pro, SD Card, MMC, or xD Card. A memory card is used as a removable disk and is useful for exchanging data between a computer and a digital device such as a digital camera.

| Memory Stick | Memory Stick Pro | SD Card | MMC | xD Card |
| --- | --- | --- | --- | --- |

**Restrictions when Using Memory Cards**

You can use memory cards for storing data only. Copyright protection function is not supported.

## To insert and use a memory card

Remove the Slot Protector first, before using the Multi Card Slot. Press the end of the Slot Protector lightly, and remove the Slot Protector when it pops up.

**You should insert the memory card with the writing on the card facing downwards.**
Inserting wrong side up may cause damage in the memory card and the computer.

**1.** Insert a memory card into the Multi Card Slot.



**2.** Click **Start > My Computer**. The inserted memory card is displayed.



Example : Memory Stick

**3.** You can write data to the memory card. If the memory card is not formatted yet, format the memory card before use.

Since the memory card may be easily mislaid when moving your computer, keep the memory card separately.

## To remove a memory card

**1.** Press the end of the memory card softly to pop it outward.

**2.** Remove the memory card.

## To format a memory card

You can use a memory card after the format operation. The procedures to format a memory card are described below.

Since format operation deletes all data in the memory card, please make sure that there is no important data in the memory card before formatting.

**To protect the data in the memory card**
Set the write protection tab of the Memory Stick or SD memory card to the Lock position.

1. Click **Start > My computer**.
2. Press the right touchpad button on the memory card drive, and select **Format** from the pop-up menu.
3. Click **Start** to start the format operation.

To use a memory card in both the computer and other digital device such as digital camera, it is recommended to format the memory card in the digital device. If you format the memory card in the computer, you may have to format the memory card in other digital device again to use the memory card in the digital device.

# Using the PCMCIA Card Slot

Various different functions can be added by inserting PCMCIA cards into the system. This system supports 16/32 bit, type I or II PCMCIA card types.

The PCMCIA card slot does not support a ZV card or a PCMCIA III card.

## To insert a PCMCIA card

**Before using the PCMCIA slot, remove the slot protector.**
Push the eject button of the PCMCIA card slot once to pop it out. Push the button again to eject the slot protector.

1. Insert a PCMCIA card into the PCMCIA card slot on the side of the computer.

Ensure that the PCMCIA card is inserted the correct way, as incorrect insertion will damage the PCMCIA card slot.



Eject Button

2. Windows automatically installs the necessary driver for the card. If there is no available driver found by Windows, you have to install the driver using a disk supplied with the card.

## To remove a PCMCIA card

1. Double-click **Safely Remove Hardware** icon ( ) on the taskbar.

2. On the [Safely Remove Hardware] dialog box, select the appropriate PCMCIA card and click **Stop**.

3. When [Stop a Hardware Device] dialog box appears, click **OK**.

4. Click **Close** to close the [Safely Remove Hardware] dialog box.

5. Push eject button of the PCMCIA card slot once, and the button pops out.

6. Push the button again to eject the PCMCIA card.

# Separating and Installing the LCD Panel

The procedures for separating the LCD panel from the system and installing the LCD panel are described below.

Separating the LCD and installing it on the cradle (optional), allows the LCD to be used as a separate LCD monitor. For the procedures to install the LCD to the cradle, refer to the additionally supplied cradle manual.

■ **Separate the LCD panel from the system only to install the LCD on the cradle. If the cradle is not available, do not separate the LCD from the system.**

■ **Do not separate the LCD panel from the system while the system is turned on or the system is in hibernation. Make sure that the system is turned off and then separate the LCD panel from the system.**

■ While separating the LCD panel, do not press the Power button or the AVS button. If any of these keys are pressed and the system is turned on when the LCD panel is separated, the system beeps and turns off after 3 seconds.

■ **Release the LCD separation lever latch when only separating the LCD panel. When releasing the LCD separation lever latch and using it for the tilt function, the signal for the LCD is cut off and no picture is displayed on the LCD screen.**

■ **In the following cases, the system is not turned on.**

- When the LCD (or an external monitor) is not installed on the system.

- When the LCD Separation Latches are not properly closed.

In this case, install the LCD or check if the LCD Separation Latches are properly closed.

## Separating the LCD Panel

The procedures to separate the LCD panel from the system are described below.

1.  Shut the system down and slide both the **LCD separation lever latches** at the bottom of the system outwards. The **LCD separation lever** is released.

LCD Separation Lever Latch

2.  Open the LCD panel of the system to **180 degrees** and place the end of the LCD panel on the **LCD Support** at the back of the cradle.
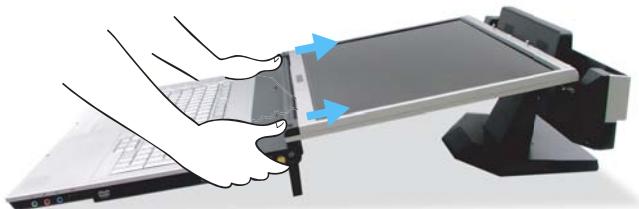
180 Degrees

LCD Support

If you open the LCD panel to 180 degrees, the **LCD hinge bar** is adjusted to 90 degrees.

If the LCD hinge bar is not adjusted to 90 degrees, you cannot install the LCD on the cradle.

**3.** Slide the LCD module slowly holding the rear part of the system so that both sides of the LCD module stick out in equal measure.



Pushing or pulling only one side of the LCD module may damage the system.

Take care not to drop the LCD module on the floor when separating the LCD module from the system, as this may damage the LCD module.

**4.** Separate the LCD module and install the **LCD connector cap**.



Wireless LAN
Antenna Cap

LCD Connector Cap

Make sure to install the **LCD connector cap** after separating the LCD module. If you do not install the LCD connector cap, the system is not turned on.

You only have to install the LCD connector cap when the LCD separation lever is opened.

The **wireless LAN antenna cap** is designed so that it can play the role of an external antenna.

**5.** Close the **LCD separation levers** by pressing them down and make sure that both the **LCD separation lever latches** are in the fix position (inside).

LCD Separation Lever

Make sure that both the LCD separation lever latches are in the fix position.

## Installing the LCD Panel onto the System

The procedures to install the separated LCD onto the cradle are described below.

**1.** Slide both **LCD separation lever latches** on the bottom of the system outwards. The **LCD separation levers** are released.

LCD Separation Lever Latch

**2.** Separate the **LCD connector cap**.

**3.** Place the LCD module on the LCD Support at the back of the cradle and push both ends of the LCD module until it '**clicks**' into place.
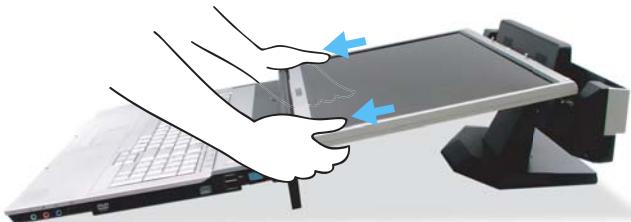


Make sure that the **LCD hinge bar** is adjusted to 90 degrees.

If you open the LCD panel to 180 degrees, the LCD hinge bar is adjusted to 90 degrees.



**4.** Close the LCD and the **LCD separation levers** by pressing them. Make sure that both the **LCD separation lever latches** are in the fix position (inside).



LCD Separation Lever

Make sure that both the LCD separation lever latches are in the fix position.

# Using EasyBox

Use EasyBox program to make use of Windows' complicated function easily and conveniently.

## Learn about EasyBox

Double-click the **EasyBox( )** icon on the desktop.
(Or select **Start > All Programs > Samsung > EasyBox > EasyBox**.)
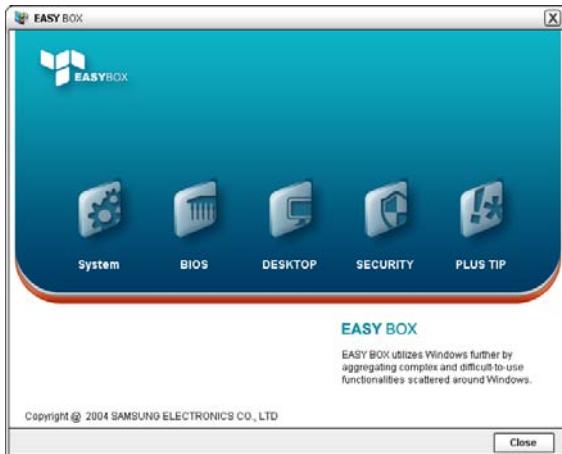


- **System**: System management features are available, including disk defragmenter, disk cleanup, computer scheduling and system restore.

- **BIOS**: In windows-based mode, you can recover the BIOS defaults and change the boot sequence.

- **Desktop**: Desktop management features include changing the font size, executing a magnifier function, the start menu settings and managing the quick launch icons on the taskbar.

- **Security**: Here you can configure the security settings supported by Windows XP SP2. You can also change the configuration of the firewall settings, Windows automatic updates and blocking pop-ups when connected to the Internet.

- **Plus Tip**: This is a collection of additional Windows functions that are useful for system management. (Offering shortcut descriptions of Windows, configuring network sharing and opening local folder sharing, etc.)

## Using EasyBox

The Security management function will be used as an example here to show the function of Easybox

### Configuring Firewall

The Windows Firewall prevents unauthorized users from gaining access to your system via the network or the Internet.

1. Click **Start > All Programs > Samsung > EasyBox > EasyBox**.
2. Click **Security** from the top menu bar.
3. Select **Windows Firewall Settings** from the Security menu on the left.
4. Select a firewall level.
5. Click **Apply**.
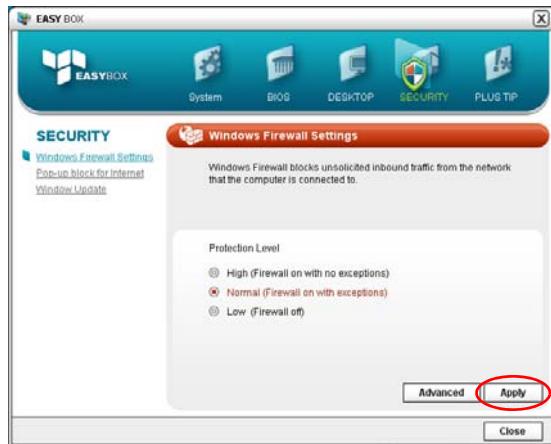


Click the User Setting button for advanced features, including exceptions and permissions.

# Using Samsung Theme

Samsung Theme is a program that enables a user to easily switch a theme (desktop, logon screen and sound effect).

Double-click the **Samsung Theme** ( ) icon on the desktop.

(Or select **Start > All Programs > Samsung > Samsung Theme > Samsung Theme**.)



Close button

Help button

Move the mouse pointer over Samsung Theme item, then the Samsung Theme will be displayed below.
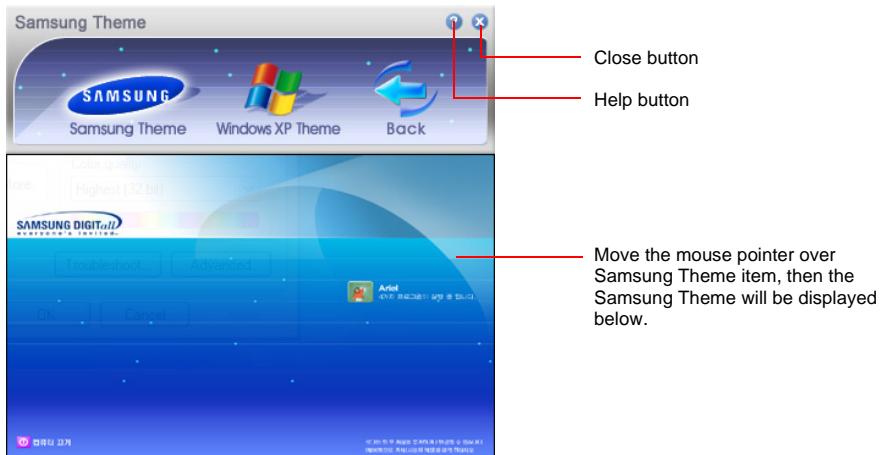
- **Samsung Theme**: Switches to Samsung Theme (desktop, logon screen and sound effects on booting).
- **Windows XP Theme**: Switches to the Windows XP default Theme.
- **Back**: Restores the theme to its previous status.

# Using Samsung Update Plus

Samsung Update Plus is software that examines and updates Samsung software and drivers installed on your Samsung computer to the latest version. To use Samsung Update Plus, your computer has to be connected to the Internet.
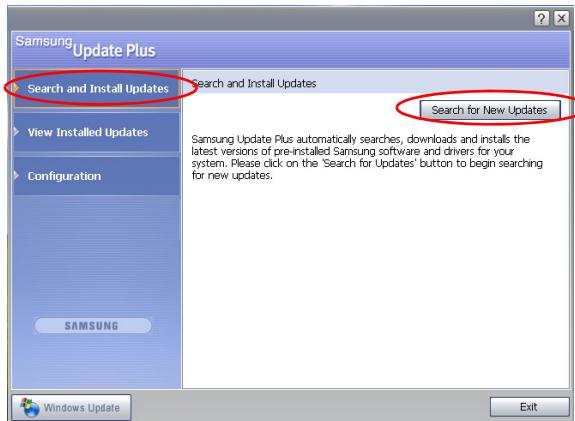
## To Update Samsung Software and Drivers

1. Select **Start > All Programs > Samsung  > Samsung Update Plus > Samsung Update Plus**.

   If this is the first time you are running the program, a window will appear asking you if you agree to the agreement in the window.
   Click Agree to use this software.

2. Click **Search for and Install Updates** and click the **Search for New Updates** button.



3. If there are available software or driver updates for your computer, the available updates will be listed. Select the required updates from the list and click **Install Update** to start the update.

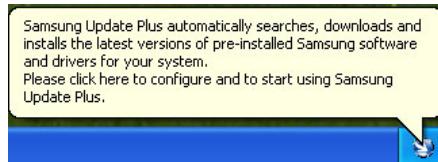   (The update list on the screen may differ depending on the computer model.)

Updates that must be installed separately.

If you select **Install** as an update item that must be installed separately, a message appears informing you of this. Follow the instruction message to correctly install it.

Automatic update items display

By default, your computer is configured to automatically search for updates. If there is a new update available, this is notified in the notification area. Click the balloon help icon in the notification area. Here you will be able to find the latest available updates.



Samsung Update Plus automatically searches, downloads and installs the latest versions of pre-installed Samsung software and drivers for your system.
Please click here to configure and to start using Samsung Update Plus.

To change the automatic update settings, click the **Configuration** button in Figure 2 and change the settings.

Samsung Update Plus does not provide updates for additionally installed software and device drivers.

# Using AVStation premium

AVStation premium is an integrated multimedia program that enables users to enjoy TV, music, photos, videos, movies, etc., without requiring any additional programs.

**Before You Start!**

- The screens used in this manual may differ from actual screens according to the program version.
- TV Station is only available for systems supporting the TV function.
- For detailed usage, refer to the program help.

## Start and Screen Layout

To launch the program, select **Start > All Programs > Samsung > AVStation premium > AVStation premium**.

Alternatively double-click the AVStation premium icon ( ) on the Desktop.
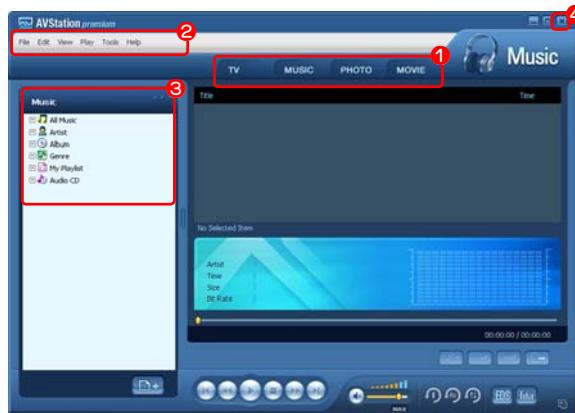


❶ **Station Bar**
❷ **Menu Bar**
❸ **Library**
❹ **Exit**
   Press the Exit button to exit the program.

### TV

You can watch and record TV programs.

### MUSIC

You can play a music file or an audio CD.

**PHOTO**

You can view or edit a photograph (image), and also view the photographs through a SlideShow.

**MOVIE**

You can play a video (movie) file or a DVD/VCD title.

## TV Station

Using TV Station, you can watch and record TV and CATV programs. In addition, you can play a recorded TV program or watch video from an external video device (e.g. camcorder) by connecting it to your computer.

> TV Station only appears for models with the TV function.

Launch AVStation premium and click on **TV** on the Station bar.



1. **TV Menu Bar**
2. **Station Bar**
3. **TV Library**
4. **TV Viewer Pane**
5. **Time Shuttle Buttons**
6. **Channel Buttons**
7. **Record Button**
8. **Recording Reservation Button**
9. **Volume Control**
10. **EDI Button**
11. **Capture Button**

> **What is Enhanced Digital Image (EDI)?**
> EDI is a visual quality improvement technology developed by Samsung Electronics. By enabling EDI while watching a TV program or playing a video on AVStation premium, you can experience clearer and sharper picture quality.

However, you cannot use the EDI function for some TV tuner and graphics cards.

For more information about Enhanced Digital Sound (EDS), see page p53.

**What is Time Shuttle?**

This refers to the function that enables you to pause or rewind a TV program while watching it.

You can rewind a TV program up to 30 minutes. Try to control a TV program by using the Time Shuttle button.

## *Connecting the TV Antenna, Configuring the Input Signal and Scanning Channels*

To watch a TV program, you have to connect an antenna, select your country, select an input signal and scan for channels.

**1.** Connect the TV antenna cable to the TV antenna jack of the computer.



Antenna

TV Antenna Jack

TV Antenna Dongle
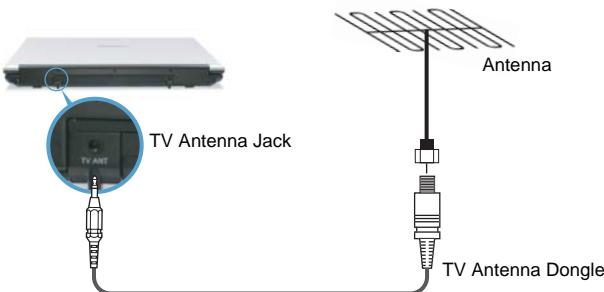
The picture of the system might differ from that of your system.

**2.** Launch AVStation premium and click on **TV**.

**3.** Select your country and only select the Composite and S-Video standards when the default settings are incorrect. Select **Tools > Options > TV > Country Settings** from the **TV Menu Bar** to configure the values. After completing the settings, click the **OK** button.
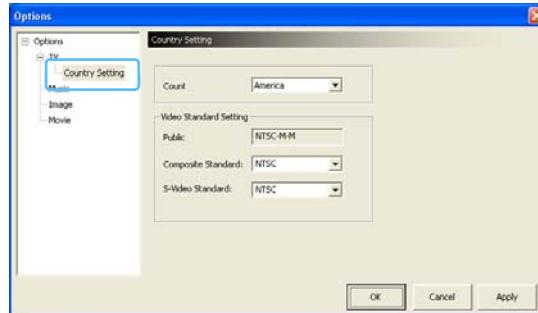


The Country Settings menu may not appear depending on your computer model.

**4.** Select a TV Input Signal. Select **Channel > Input Signal** from the **TV Menu Bar** and select either **TV (Public Broadcasts)** or **CATV (Cable TV)**.



**Connecting to a Set-Top-Box**

● To connect using a **coaxial (TV antenna) cable**, select **CATV (Cable TV)**.

● To connect using a **Composite (Audio/Video) cable**, select **COMPOSITE**.

● To connect using an **S-Video cable**, select **S-VIDEO**. However, some computers do not support S-Video.

**5.** Scan for channels. Select **Channel > Scan Channels** from the **TV Menu Bar**.

If the [Confirm Channel Scan] window appears, click the **Yes** button to start scanning for channels. When the scan is complete, found channels are displayed in the **Channels** folder of the TV Library in the left pane and the program of a selected TV channel is displayed in the TV Viewing Pane.



When a set-top-box is connected, the channels on the set-top-box need to be configured and changed. If you have connected a set-top-box using a coaxial cable, you need to set the channel to **3** or **4** according to the set-top-box channel selection of AVStation premium.

## Watching TV

Move to TV Station and double-click on a channel in the **Channels** folder. The program broadcast on that channel is displayed in the TV Viewing pane.

- **Changing Channels**

  Click the Channel buttons (  ) below the TV Viewer or double-click a channel from the TV Library.

  Alternatively, click the **Channel button** of the computer.

  To delete all registered channels, click on **Reset Channels** from the menu.

- **Watching in Full Screen mode**

  Double-click on the TV screen to watch TV in full screen mode. To return to the previous TV screen size, double-click on the TV screen again.

- **Capturing a TV Screen**

  Click the **Capture** (  ) button below the TV Viewer to capture the currently displayed image on the screen. Captured images are saved in the C:\Program Files\Samsung\AVStation Premium xx\Data\Captured Images folder.

  In addition, you can view captured images in the **PHOTO Station > Captured Images** folder.

## Recording a TV Program

To record the current TV program, click the **Record** (  ) button below the TV Viewing pane.

To stop a recording, click the **Stop** (  ) button.

When a recording is complete, the recorded file appears in the **Recorded TV** folder of the TV Library.

> Recorded TV files are saved in the C:\Program Files\Samsung\AVStation Premium xx\Data\Recorded TV folder.
>
> You can watch a recorded TV program in the **TV Library > Recorded TV** folder or the **MOVIE Station > Recorded TV** folder.

## Reserving a TV Recording

You can reserve a TV recording.

**1.** Click the **Recording Reservation** (  ) button below the TV Viewing pane.

**2.** If the Add Recording Reservation window appears, enter a **Name**, the **Channel Number** and the **Recording Frequency** and click the **Next** button.
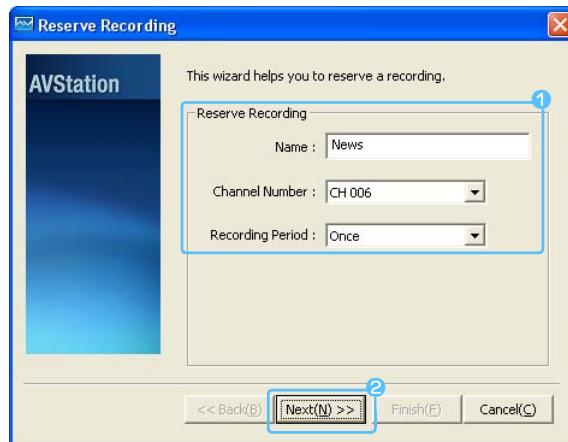


**3.** Set a recording reservation and click the **Next** button.

**4.** Confirm the recording reservation settings and click the **Finish** button.

> If a recording reservation is set, the recording reservation name appears in the **TV Recording Reservation** folder of the TV Library.

> If a recording reservation is added, set the computer to Standby mode rather than switching the computer off, as the reservation is not performed if the computer is switched off. In addition, if there is insufficient free space on the hard disk drive, the recording reservation will fail.

## Playing a Recorded TV Program

You can play a recorded TV program from the TV and MOVIE Stations.

**1.** Double-click the **Recorded TV** folder of the TV Library.

**2.** Double-click a recorded TV file. The recorded TV is played and play control buttons appear below the TV viewer window.

> You can also play a recorded TV program in the **Recorded TV** folder of the MOVIE Station Library by double-clicking it.

*Watching Video from an External Video Device*

As an example, watching video from a camcorder is described below.

To watch video from an external video device, you have to connect the computer and the external video device using the AV input cable and configure the country and input signal settings.
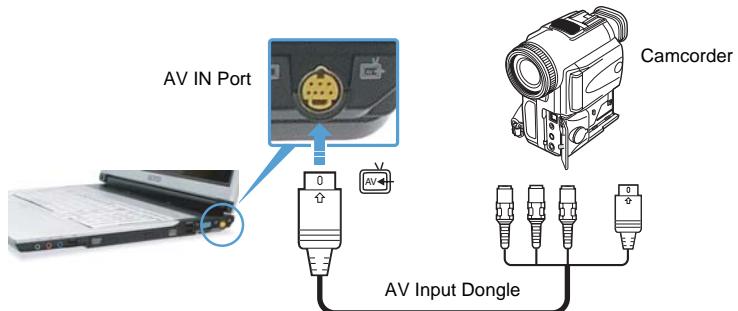
**Playing a Video Device**
You can watch video from a video device connected through the Composite or S-Video port, on the TV Station of AVStation premium.

Some computers do not support S-Video input.

1. Connect one end of the **AV Input Dongle** to the **Composite** or **S-Video** port of the camcorder and connect the other end of the dongle to the **AV In port** of the system.



2. Launch AVStation premium and click on **TV**.

3. Select your country and only select Composite and S-Video standards when the default settings are incorrect. Click **Tools > Option > TV > Country Settings** from the **TV Menu Bar** to set the values. After completing the settings, click the **OK** button.

   The Country Settings menu may not appear depending on your computer model.

4. Select an input signal. Select **Channel > Input Signal** from the **TV Menu Bar** and select either **Composite** or **S-Video**.

5. When playing a file on the camcorder, the video from the camcorder is displayed in AVStation premium.

## MUSIC Station

Launch AVStation premium and click **MUSIC** on the Station Bar.



❶ MUSIC Menu Bar
❷ Station Bar
❸ MUSIC Library
❹ Register a File
❺ Playlist
❻ Playlist Control Buttons
❼ Play Control Buttons
❽ Volume Control
❾ Play Options
❿ EDS Setting Button

**What is EDS (Enhanced Digital Sound)?**
EDS (Enhanced Digital Sound) is a sound quality enhancement technology developed by Samsung Electronics. You can listen to clearer sound if you enable the EDS function when playing music or video on AVStation premium.

### Playing an Audio CD

The procedures to play an audio CD are described below.

**1.** Launch AVStation premium and insert an audio CD into the CD drive.

**2.** In the **Audio CD** window, select **Play Audio CD using Samsung AVStation** and click the **OK** button.



**3.** The tracks on the audio CD are displayed in the Playlist and the first track is automatically played.



If an audio CD is already in the CD drive, double-click the **album title** in the **Audio CD** folder of the Library and add the tracks to the Playlist. The tracks added to the Playlist are played.

## *Playing a Music File*

If a music file is registered to the MUSIC Library, you can easily play the music file.

For the procedures to register tracks to the Library, refer to (p56).

1. Move to **MUSIC Station** and double-click on **All Music**.
2. Double-click a music file. The file is added to the playlist and played.



**Play a Track not registered to the Library**

Click **File > Open**, select a music file to be played and click **Open**. The selected track is registered to the Library and played.

**Creating My Playlist**

My Playlist is a personal album with which you can collect, manage and play your favorite music files. For the procedures to create My Playlist, refer to the descriptions of MUSIC Station in Help.

## *Adding Music Files to the Library*

MUSIC Library is a library holding music files used by MUSIC Station. The procedures to add music files saved on the computer to the Library are described below.

You can add files, folders or search and add files. As an example, the procedures to add a folder are described below.

**1.** Click on the **Register a File** (  ) button below the Library and click on **Add by Folders**.
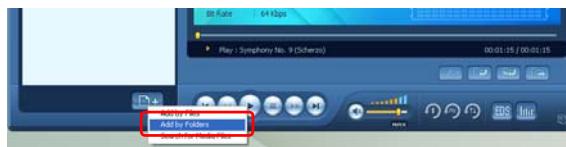


**2.** Select a folder which included music files and click the **OK** button. The music files in the folder are added to the Library.



 The tracks used in AVStation are automatically added to the Library.

# PHOTO Station

Launch AVStation premium and click PHOTO on the Station Bar.



**①** PHOTO Menu Bar
**②** Station Bar
**③** PHOTO Library
**④** Register a File
**⑤** Image Viewer Tab
**⑥** Image Editor Tab
**⑦** Move to a Higher-Level Folder
**⑧** Preview/Zoom-in

## Viewing an Image

The procedures to view images registered to the PHOTO Library one by one and through a SlideShow are described below.

For the procedures to register image files to the Library, refer to (p60).

1. Move to **PHOTO Station** and double-click on **All Images**.
2. Click on a folder which includes images, and the images in the folder are displayed in the Image Viewer window.



Image Viewer Window

Image

**3.** Double-click on an image. The selected image is zoomed in on.



- Viewing an Image not registered to the Library

  Click **File > Open**, select an image file to view and click **Open**.

  The selected image file is registered to the Library and displayed in the Image Viewer window.

- Viewing an Image in Full Screen or through a SlideShow.

  Click the **Full Screen** ( [ F ] ) button or **SlideShow** ( [ ] ) button below the Image Viewer window.

  To return to the Image Viewer window, press the **<Esc>** key or double-click on the screen.

- Watching a SlideShow while Listening to Music

  To watch a SlideShow while listening to music, play music from MUSIC Station and run SlideShow.

- Setting an Image as the Background.

  Click the **Set as Background** button below the Image Viewer window. The selected image is set as the Desktop background.

## Editing an Image

You can change the shape of an image, edit an image or apply special effects to an image. The image editor functions are described below.

**1.** Select an image to edit in **the Image Viewer window**, and select the **Image Editor** tab. The Image Editor screen appears.

The Image Editor screen consists of an **Image Workspace window** and **3 Tool tabs**.



Image Workspace

Zoom In / Zoom Out

Tool Tabs

**2.** Edit the image using the Shape, Edit and Effect tools.

> **Shape tool:** Change the shape of an image through cut, resize.
> **Edit tool:** Draw a line, add some clip art or enter letters.
> **Effect tool:** Apply various effects to an image.

**3.** When finishing editing an image, click the **Save Edited Image** ( ) button below the Image Editor window. The edited image is saved.

### Adding Images to the Library

The PHOTO Library is a library holding image files to be used by PHOTO Station. The procedures to add image files saved on the computer to the Library are described below.

You can add files, add folders or search and add files. As an example, the procedures to add folders are described below.

1. Click the **Register a File** (  ) button below the Library and click on **Add by Folders**.
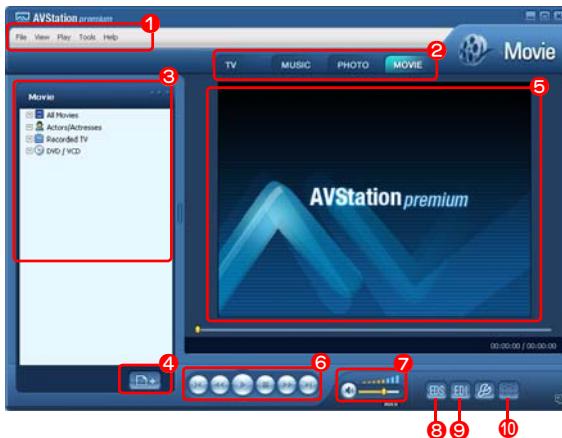


2. Select a folder which includes image files and click the **OK** button. The image files in the folder are added to the Library.

 The image files used in AVStation are automatically added to the Library.

## MOVIE Station

Launch AVStation premium and click on **MOVIE** on the Station Bar.



❶ MOVIE Menu Bar
❷ Station Bar
❸ MOVIE Library
❹ Register a File
❺ Video Play window
❻ Play Control Buttons
❼ Volume Control
❽ EDS Setting Button (p53)
❾ EDI Setting Button
❿ Capture Button

**What is EDI (Enhanced Digital Image)?**

EDI (Enhanced Digital Image) is a visual quality enhancement technology developed by Samsung Electronics. You can view a clearer and sharper picture by enabling the EDI function when watching TV or playing a video on AVStation premium.

However, some TV tuners and graphics cards are not supported by EDI.

For information on EDS (Enhanced Digital Sound), refer to p53.

## Playing a DVD

The procedures to play a DVD title are described below.



To play a DVD title, **DVD playing software** (e.g. CyberLink PowerDVD) must be installed. Install the DVD playing software first.

1. Launch AVStation premium and insert a DVD title into the DVD drive.

2. In the **'What do you want Windows to do?' window**, select **Play DVD Video using Samsung AVStation** and click the **OK** button.



3. The DVD title is played.





If a DVD title is already in the DVD drive, double-click the **DVD title** in the **DVD / VCD** folder of the Library. The DVD title is played.

## Playing a Movie(Video) File

The procedures to play a video file registered to the MOVIE Library are described below. For the procedures to register files to the Library, refer to p64.

**1.** Move to **MOVIE Station** and double-click **All Movies**.

**2.** Double-click a video file. The file is played.



- Playing a Video File not Registered to the Library

  Click **File > Open**, select a video file to be played and click **Open**. The selected file is registered to the Library and played.

- **Playing a Video File in Full Screen**

  1) Double-click on the current playback screen.

  2) The video is played in full screen. In full screen, move the mouse pointer to the bottom of the screen to show the Play Control bar.

  To play at the default screen size, press the **<Esc>** key or double-click on the screen.

- **Capturing the Video Screen**

  Click on **Capture Current Screen** (  ) below the Play window when the desired image appears on the screen and click the **OK** button.

  Captured images are saved in the **C:\Program Files\Samsung\AVStation Premium xx\Data\Captured Images** folder.

  In addition, you can view captured images in the **PHOTO Station > Captured Images** folder.

## *Adding Videos to the Library*

The MOVIE Library is a library holding video files to be used by MOVIE Station. The procedures to add video files saved on the computer to the Library are described below.

You can add files, add folders or search and add files. As an example, the procedures to add folders are described below.

1.  Click the **Register a File** (  ) button below the Library and click **Add by Folders**.
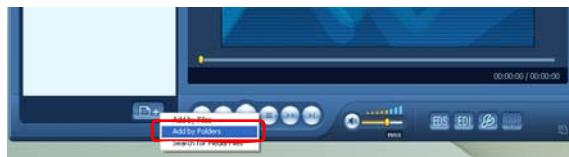


2.  Select a folder which includes video files and click the **OK** button. The video files in the folder are added to the Library.

 The video files used in AVStation are automatically added to the Library.

# AVStation now / AVStation premium Viewer

This program displays music, photos, videos, movies, TV, etc. in full screen. You can enjoy multimedia files using AVStation now when your computer is turned off, and using AVStation premium Viewer when it is turned on.

**Before Starting!**

- **Restrictions for AVStation now**

  You can only use AVStation now when the computer is turned off.

  In AVStation now, you can play files registered to the AVStation premium library or saved to My Computer or the Multi-card slot (optional). (For information on how to register files, see pages p56, p60 and p64.)

  When defining an account password or configuring the security for folders, AVStation now cannot play files in the corresponding folders.

- **Restrictions of AVStation premium Viewer**

  In AVStation premium Viewer, you can only play files registered to the AVStation premium library. (For information on how to register files, see pages p56, p60 and p64.)

- Since the screen layout and the usage of the two programs are similar, this manual will describe the screen layout and the usage on the basis of AVStation now.

- The screen appearance may differ depending on the program version.

- TV Station only appears for models with the TV function.

- A remote control is optional. For using the remote control, see page p69. If your system is supplied with a remote control, refer to the descriptions of [Remote Control].

## Starting and Exiting AVStation now

### *Starting*

Press the **AVS** button ( [ 🖥 ] , [ 🎵 ] , [ 💿 ] , [ 🎞 ] ) when the computer is turned off.

For models without the TV function, a [ 🖼 ] button is provided. Press the [ 🖼 ] button to display the AVStation now start screen.

### *Exiting*

Move the mouse pointer to the top of the screen and click the **Exit** ( [❌] ) button.

Alternatively, press the **Power** button of the computer.



If your system is supplied with a remote control, pressing the **Power/Standby Mode** button on the remote control terminates the program immediately.

## Start / Exit AVStation premium Viewer

### *Starting*

Select **Start > All Programs > Samsung > AVStation premium > AVStation premium Viewer** from Windows.

Alternatively, press the **AVS** button ( [ 🖥 ] , [ 🎵 ] , [ 📷 ] , [ ⏸ ] ) in Windows.

For models without the TV function, a [ 🖼 ] button is provided. Press the [ 🖼 ] button to display the AVStation Viewer start screen.

### *Exiting*

Move the mouse pointer to the top of the screen and click the **Exit** ( [✖] ) button.

## Screen Layout



**TV**

You can watch TV programs.

**MUSIC**

You can play a music file or audio CD.

**PHOTO**

You can view a photograph or image file one by one or in a SlideShow.

**MOVIE**

You can play a video, DVD or VCD title.

**Settings**

You can change the TV, Music, Photo and Movie settings.

**Moving to the Start Screen While Using the Program**
Press the <**Esc**> key. Alternatively, move the mouse pointer to the left top of
the screen and click the **AVStation** icon ( ).

# Using the Remote Control

The basic uses of the remote control are described below. For more detailed information on the button functions, refer to "Using the Remote Control (Optional)" on page 16.

A remote control is optional and is only provided for some models.

- **Starting the Program**

  Click the **AVS** button on the remote control.

  Press the **AVS** button to move to the start screen while using the program.

- **Moving to an Item**

  Press the **Direction** buttons on the remote control to move to an item.

- **Selecting or Running an Item**

  When an item is selected, press the **ENTER** button on the remote control.

- **Moving to the Previous Screen**

  Click the **BACK** button on the remote control.

- **Exiting the Program**

  1. Press the **AVS** button on the remote control to move to the start screen.

  2. Press the ▶ button to move to the **Exit** button ( 🗙 ) and press the **ENTER** button.



In AVStation now, you can also exit the program by pressing the **Power / Standby** button on the remote control.

## TV Station

'How to watch TV' is described below.

> To watch a TV program, you have to connect the antenna, select your country, select an input signal and scan for channels. For more information, refer to [**Connecting the TV Antenna, Setting the Input Signal and Scanning Channels**] of AVStation premium on page p47.
>
> You can also select a TV input signal and scan for channels in AVStation now.
>
> To configure the TV input signal in AVStation now, select **Settings > TV > Input Signal > TV (Public Broadcasts)** or **CATV (Cable TV)** in the AVStation now start screen.
>
> To register a channel in AVStation now, run TV Station and click on **Scan Channels** below the TV window.

**1.** Run AVStation now and click on **TV**.

**2.** Click **Channel** and double-click a channel in the Channels pane on the right side.

The program on the selected TV channel is displayed on the screen.



❶ **TV Viewer Pane**

❷ **Channels Pane**

❸ **Channel**

When scanning channels in AVStation premium, they are displayed in the Channels pane.

- **Changing Channels**

  Double-click a channel in the right Channels pane.

- **Watching in Full Screen mode**

  Click the **Full Screen** ( Full Screen ) button below the TV Viewing window to watch TV in full screen mode. To return to the previous TV screen size, move the mouse pointer to the bottom of the screen and click the **Back** ( ◄Back ) button.

## MUSIC Station

The procedures to play a music file or an audio CD are described below.

### Playing a Music File

The procedures to play a music file registered to the MUSIC Library are described below. (For the procedures to register files, refer to p56.)

**1.** Launch AVStation now and click on Music.

**2.** Click on All Music and double-click a file in the right pane.

The music file is played.



❶ **My Computer**
This only appears in AVStation now. You can manually find and play files on My Computer or the multi card slot.

❷ **All Music**
❸ **Playlist Window**
❹ **Music File**

### Playing an Audio CD

**1.** Launch AVStation now and insert an audio CD into the CD drive.

**2.** In the AVStation now start screen, click on **Music**.

**3.** Double-click the **Audio CD** in the left pane and double-click on an album or music file in the right pane. The selected music file is played.



## PHOTO Station

The procedures to view images registered to the PHOTO Library one by one and through a SlideShow are described below.

(For the procedures to register image files to the Library, refer to p60.)

**1.** Launch AVStation now and click on Photo.

**2.** Click on **All Images** and double-click on an image file in the right pane.



❶ **My Computer**
This only appears in AVStation now. You can manually find and play files on My Computer or the multi card slot.

❷ **All Images**

❸ **Image File**

**3.** The selected image is zoomed in on.



> **To view an image in Full Sreen or through a SlideShow.**
>
> Click on the **SlideShow** or **Full Screen** button below the zoomed in image.
>
> To return to the previous status in SlideShow or Full Screen, press the **<Esc>** key or double-click on the screen.
>
> In AVStation now, press the <**Esc**> key or double-click and click **Back**.

## MOVIE Station

The procedures to play a video (movie) file or DVD/VCD title are described below.

### Playing a Movie File

The procedures to play a video file registered to the MOVIE Library are described below. (Refer to p64.)

**1.** Launch AVStation now and click the **Movie**.

**2.** Click on **All Movies** and double-click a movie file in the right pane.

The movie file is played.



**My Computer**
This only appears in
AVStation now. You can
manually find and play
files on My Computer or
the multi card slot.
**All movies**
**movie File**



**Showing the Play Control window**

Press the space bar or move the mouse pointer. The Play Control window
appears at the bottom.

## Playing a DVD

1.  Launch AVStation now and insert a DVD title into the DVD drive.

2.  In the AVStation now start screen, click on **Movie**.

3.  Click on **DVD/VCD** and double-click on the DVD title. The DVD title is played.

# Using Samsung Smart Screen

Use Samsung Smart Screen program to arrange desktop icons as desired and manage them effectively.

**1.** Click **Start > All Programs > Samsung > Samsung Smart Screen > Samsung Smart Screen**.

> When you launch Samsung Smart Screen for the first time, a dialog box asking whether to register the program as a start program or not appears. If you select OK, the program is automatically launched when you start your computer.

**2.** Samsung Smart Screen appears. When you run the program for the first time, the water drop image is displayed.



Click a water drop to open and close the group.

**3.** To move an icon, click a water drop to open it, then drag an icon to another water drop.

> **To return to Windows desktop**
> Right-click on Samsung Smart Screen and click **Windows desktop**. Windows desktop is displayed.
>
> To return to Samsung Smart Screen, double-click ( ) icon on the taskbar.
>
> **To change background or skin**
> Right-click on Samsung Smart Screen and select desired item.
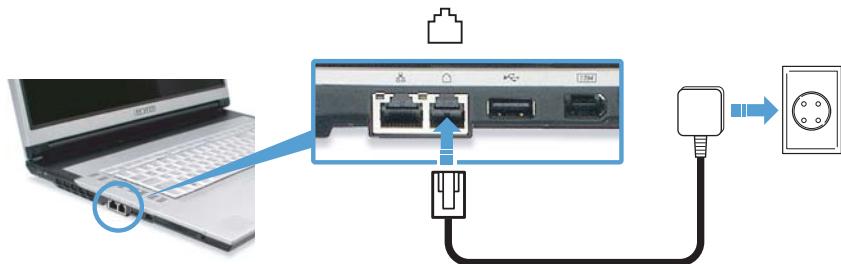
# Connecting to the Internet

## Connecting with a Modem

**Before You Start:**

- Use a standard non-digital phone line to connect.

- Contact an internet service provider (ISP) for instructions on how to connect to and disconnect from the Internet.

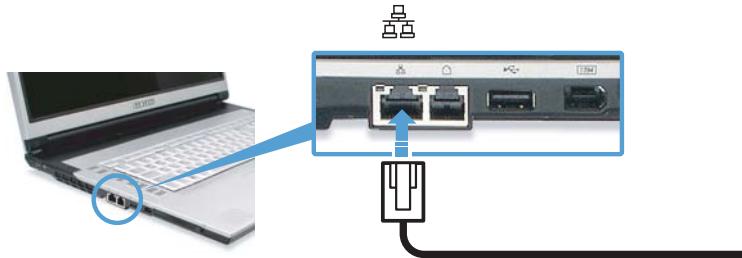**1.** Connect a telephone line to the computer's **modem port**.



**2.** Connect to the Internet according to the instructions provided by your ISP.

If the Internet connection is not disconnected properly, additional telephone charges may be imposed.

# Connecting Through a Wired LAN

1. Connect a LAN cable to the computer's **LAN port**.



2. Click **Start > Control Panel**.
3. Click **Network and Internet Connections** in the [Control Panel] window.
4. Click **Network Connections** in the [Network and Internet Connections] window.
5. Right-click the **Local Area Connection** icon and click **Properties**.
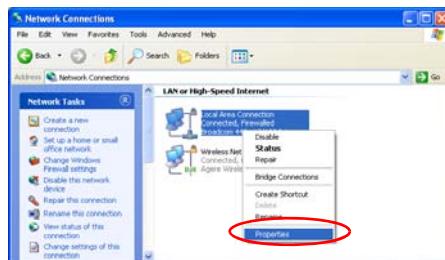


6. On the **General** tab, select "Internet Protocol(TCP/IP)" and click **Properties**.
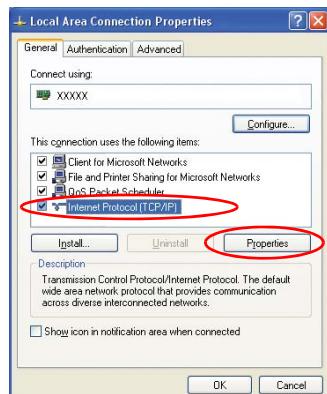
7.  **To use DHCP:**
    On the **General** tab, select "Obtain an IP address automatically" and "Obtain DNS server address automatically". Click **OK**.

    **To use a static IP:**
    On the **General** tab, select "Use the following IP address" and fill in the IP address, Subnet mask, Default gateway, Preferred DNS server, and Alternative DNS server fields. Click **OK**.

    **To use both DHCP and static IP simultaneously:**
    On the **Alternate Configuration** tab, click **User configured** and fill in the fields. Click **OK**.
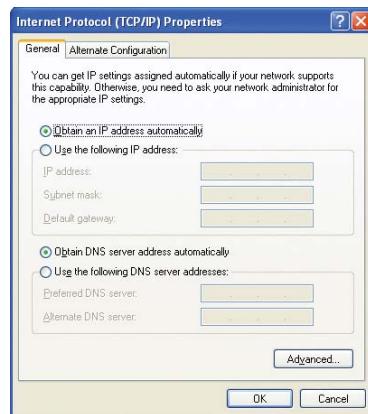
# Connecting Through a Wireless LAN (Option)

A wireless network (Wireless LAN) environment is a network environment that enables communication between multiple computers at home or a small-size office through wireless LAN devices.

Using the wireless network connections between the systems, you can use normal network functions such as sharing of files, folders and printers. When a computer-to computer network has been established, a computer that is not connected to the Internet can share the Internet by accessing another computer connected to the Internet. For details, see "Sharing Internet Access" on page 93.

> The description in this section refers to the Intel(R) PRO/Wireless 2200BG Network Connection (hereafter referred to as an 802.11BG card) and the Intel(R) PRO/Wireless 2915ABG Network Connection (hereafter referred to as an 802.11ABG card) device.
>
> A wireless LAN card is optional. The model of the wireless LAN card is determined by the relevant product.
>
> To view the installed wireless LAN card, click Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager.
>
> The wireless LAN connection settings will be described on the basis of the Windows XP Service Pack 2 installed computer.
>
> It is recommended using the default settings provided by Windows XP for the wireless LAN settings for Windows XP installed computers.
> To setup using the software supplied by the wireless LAN card manufacturer, refer to 'Wireless Network Setup Using the Wireless LAN Setup Program' (p85).
>
> To use the wireless network, you have to turn on the wireless LAN function by using the Wireless LAN On/Off Button. (p 7)

Wireless network connections can be classified into two categories.

### 1) Access Point (AP)

You can connect to an AP to use the network. This is possible only in an environment equipped with an AP. For details, see "Connecting to an Access Point (AP)" on page 80.

> **What is an Access Point (AP)?**
> An AP is a network device that bridges wired and wireless LANs, and corresponds to a wireless hub in a wired network. You can connect multiple wireless LAN installed computers to an AP.

**2) Computer-to-computer (ad hoc)**

This is also called a peer-to-peer network.

In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules. For details, see "Connecting to computer-to-computer networks (peer-to-peer or ad hoc)" on page 81.

## Connecting to an Access Point (AP)

This section describes how to connect to an AP. You can use the network when you are connected to an AP.

> For more detailed information such as the network key (encryption key), ask your network administrator.

1. Right-click on the **Wireless Network Connection** (📶) icon on the taskbar, and select **View Available Wireless Networks**.



2. Select an AP (E.g. Test) to connect to and click **Connect**.
   If there is a configured network key for the AP to connect to, the Enter Network Key window appears.
   Enter the **Network Key** in the window and then click the **Connect** button.
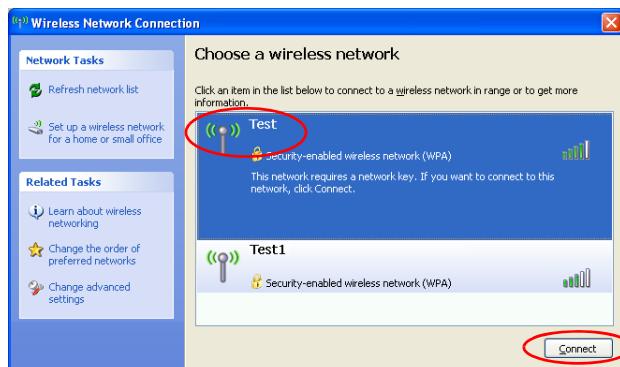
When a network key is not defined for a selected AP, click on Link to display the warning message box. Then click Connect again in the box.

Now when **Connected** in AP is displayed, and you can access the network.

**Checking the connection status**

Move the mouse pointer over the Wireless Network Connection () icon on the taskbar, and the connection status is displayed.



## Connecting to computer-to-computer networks (peer-to-peer or ad hoc)

In computer-to-computer wireless networks, you can wirelessly connect 2 or more computers that have wireless LAN modules. Using this method, a computer that is not connected to the Internet can share the Internet by accessing another computer connected to the Internet. (Refer to "Sharing Internet Access" on page 93.)

You can connect by completing the following steps:

- Step 1. Set up a computer-to-computer network on a computer.
- Step 2. Connect to the configured computer from other computers.

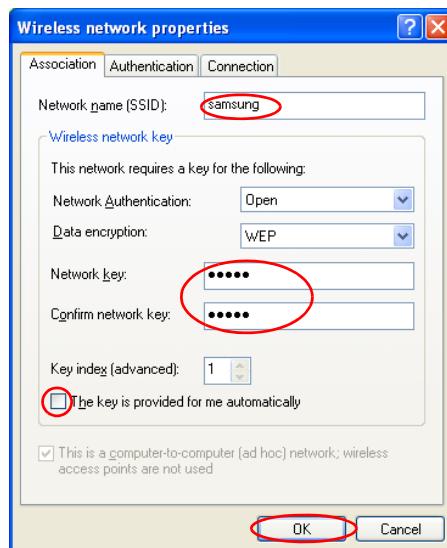### Step 1. Setting up a computer-to-computer network

1. Right-click on the **Wireless Network Connection** () icon on the taskbar, and select **View Available Wireless Networks**.

**2.** Click **Change the order of Preferred Networks**.
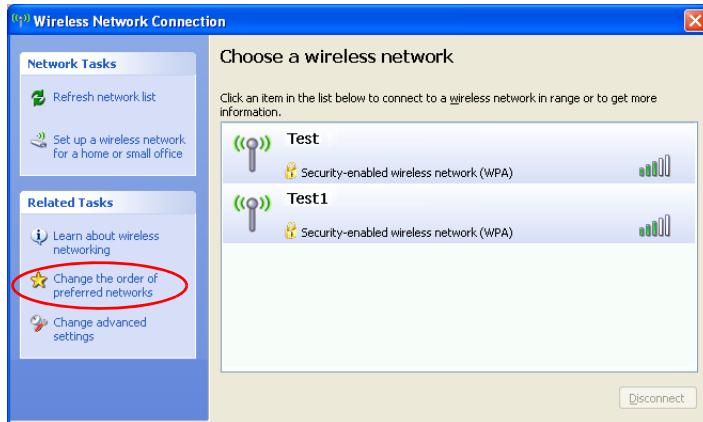


**3.** On the **Wireless Network** tab, click **Advanced**.

**4.** Clear 'Automatically connect to non-default network' check box, if it is selected. Select 'Computer-to-computer (ad hoc) networks only', and click **Close**.

**5.** In the **Wireless Networks** tab, click **Add**.

**6.** Enter the network name (e.g. samsung), and unselect 'The key is provided for me automatically'. Enter the encryption key in the Network key field, and click **OK**.

To prevent a network connection from an unauthorized user, it would be better to configure a network key (encryption key). A network key consists of 5 ~ 13 alphanumeric characters (e.g. magic), or of 10 ~ 26 hexadecimal numbers (a hexadecimal number is represented by numbers '0' to '9' or letters 'a' to 'f').

**7.** Check that the configured network name (e.g. samsung) is in the 'Preferred networks' item, and click **OK**.
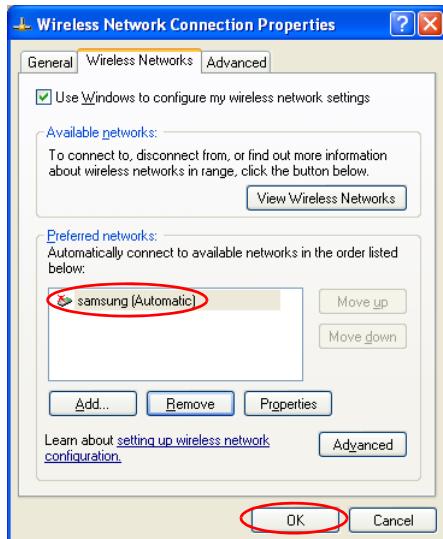


Now your wireless network setup has been completed.

*Step 2. Connecting to the configured computer*

**1.** Right-click on the **Wireless Network Connection** ( ) icon on the taskbar, and select **View Available Wireless Networks**.

**2.** Select the wireless network name (e.g. samsung) specified in "Connecting to computer-to-computer networks (peer-to-peer or ad hoc)" on page 81, and click **Connect**.
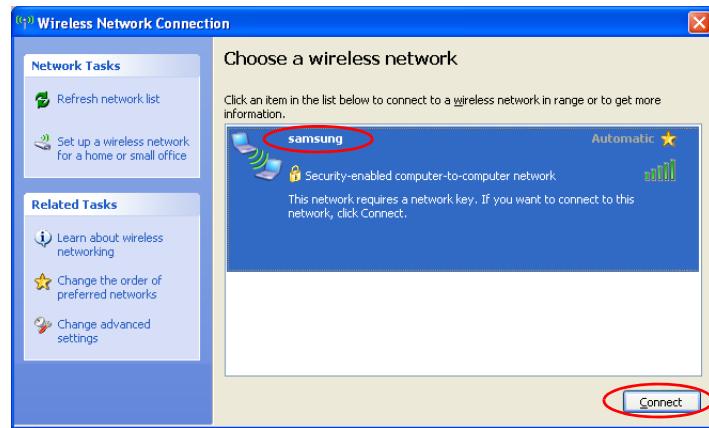
**3.** Enter a cryptographic key in the network key box and click **Connect**.



> If the network key is not configured in "Connecting to computer-to-computer networks (peer-to-peer or ad hoc)" on page 81, just click **Connect**, without any keystrokes.
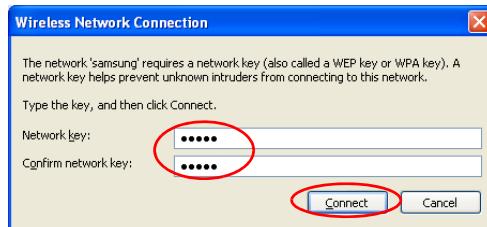
When connected to the wireless network, the system displays **Connected** in the selected network of the Network Connection window.

> **Checking the connection status**
> Move the mouse pointer over the Wireless Network Connection (  ) icon on the taskbar, and the connection status is displayed.

## Wireless Network Setup Using the Wireless LAN Setup Program

You can use a wireless LAN by using a wireless LAN configuration program (PROSet) provided separately.

To use wireless network connection, complete the following procedures.

- Step1. Install the wireless LAN configuration program (PROSet).
- Step2. Configure wireless network settings through the wireless LAN configuration program.

### Step 1. Installing the wireless LAN configuration program (PROSet)

You can install the wireless LAN client administrator program following the instruction displayed automatically when you insert the system software Media. Insert the system software Media into the CD-ROM drive, and install the wireless LAN configuration program.

### Step 2. Using the wireless LAN configuration program (PROSet)

Double-click the **wireless LAN program** () icon on the taskbar.
(Or, click **Start > All Programs > Intel PROSet Wireless > Intel PROSet Wireless**.)

> In some languages, some buttons on the window may not be displayed. If this is the case, resize the window to use the program.

Configure wireless network settings in PROSet following the procedures below.

**To connect to an Access Point:**

To connect to an access point or existing computer-to-computer (Ad Hoc) network, refer to the following procedures. (To create a new computer-to-computer network, refer to the following "To create computer-to-computer (Ad Hoc) network" section.)

1. In Available Networks, click on **Refresh**.

**2.** Select the name of desired access point or computer-to-computer network to connect from the searched available networks list, and click **Configure**.

If your desired network does not appear, click **Refresh**.

An access point is represented by the ( ) icon, and a computer-to-computer network is represented by the ( ) icon. An ( ) icon is displayed in front of an access point or a computer-to-computer network with configured security settings.

**3.** Enter **Profile Name** and click **Next**.

**4.** In the Search Security Settings window, the wireless network security search message will appear. Click **Next**.

**5.** Enter the **network authentication**, **data encryption (WEP)**, **encryption level, key index**, and **wireless security password** configured for the target access point or computer-to-computer network in the Security Settings window, and click **Next**.

The network authentication, data encryption (WEP), key index, and password of a access point are configured in the access point management program. For information on the security information, check the security settings of the access point or ask your wireless network administrator.

To connect to an existing computer-to-computer (Ad Hoc) network, enter the password configured when creating the computer-to-computer network for the first time. You do not need to enter network authentication or key index.

**Security Settings**

- **Network authentication**: The network authentication option includes Open System and Shared Key. When you select Open System, no authentication is applied (however, encryption is supported). When you select Shared Key, a WEP key is used for authentication. The default setting is Open System.

- **Data encryption (WEP)**: The IEEE 802.11 WEP (Wired Equivalent Privacy) standard defines two levels of encryption, a 64-bit key (this is sometimes represented by 40bits) and a 128-bit key.

- **Key index**: Select the current encryption key index used by the access point out of 1 to 4.

- **To use encryption key**: Click **Use pass phrase** to activate, and enter 5 (for 64-bit) or 13 (for 128-bit) alphanumeric characters (represented by 0-9, a-z, or A-Z).

6. The Done window appears, click **OK**.

When a wireless connection to an access point is established, the connection icon ( (( )) ) appears in front of the name of the connected profile.

**To create a computer-to-computer (Ad Hoc) network:**

To create a new computer-to-computer (Ad Hoc) network or to connect to a hidden access point (Stealth/Closed Mode), refer to the following procedures.

> A hidden access point is an access point that exists, but is configured not to be detected by the scan operation to prevent access attempts from unauthorized users.

1. In Profiles, click on **Add**.

2. Enter **Profile Name** and **Network name (SSID)**, select **Operating Mode**, then click **Next**.

> **What is a network name (SSID)?**
> Network name (SSID) is a name that a wireless adapter uses for identifying connection. Enter the name of computer-to-computer network to create (e.g., samsung) or the name of access point to connect. The network name identifies cases. (capital and lowercase) For the name of access point, check the settings of the access point, or ask your wireless network administrator.
> **Operating Mode:**
> – **Network (Infrastructure) - Connect to an Access Point** : Select to connect to an access point.
>
> – **Device to device (Ad hoc) - Connect directly to other computers** : Select to create a computer-to-computer (Ad Hoc) network.

3. Configure password setting to be used for computer-to-computer network connection in the Security Settings window.
To connect to an access point, enter the **network authentication**, **data encryption (WEP)**, **encryption level, key index**, and **wireless security password** configured in the access point.

It is recommended to configure data encryption for security purposes when creating a computer-to-computer network connection profile. For more information on security settings refer to the security settings in Connecting to AP or Help.

When you are creating a computer-to-computer network connection profile, the network authentication setting is disabled.

4. When a profile creation is completed, the new created profile appears in the profiles list. Select corresponding profile, and click **Connect** to connect to the created profile.

   When a wireless connection to the created profile is established, the connection icon (  ) appears in front of the name of the connected profile.

# Using Samsung Network Manager

Samsung Network Manager is a program that has been developed to enable users to use the network easily.

Samsung Network Manager provides the following features.

- **You can easily set up the network and printer settings.**
- **You can immediately use the network without defining new network settings again after moving locations.**
  By setting the network settings (IP address, printer settings, etc.) for each location, you can immediately access the network without following network setting procedures each time regardless of your location.
- **You can easily share Internet Access.**
  You can share your Internet connection by setting up a computer with 2 LAN interfaces (wired and wireless, or 2 wired LAN) as the sharing server. Then, you can access the Internet on a sharing client by connecting to the sharing server.
- **You can diagnose the network status.**
  You can diagnose the network status when the network is not properly connected.

## Using the Network

This section describes the procedures to connect to the Internet by setting up a network. The setting up procedures include the procedures to add a printer to the network.

> The setting up procedures are different for wired and wireless LAN connections.
>
> To use a wireless LAN, there should be a wireless LAN AP available nearby.

### Setting Up a Network

1. To use a wired LAN, connect the LAN cable to the LAN port.
   To use the wireless LAN, if the wireless LAN is switched off, press the Fn+[F8] key to turn it on. If the wireless LAN is switched on, the wireless LAN LED turns on.

2.  Run Samsung Network Manager.
    Select **Start > All Programs > Samsung > Samsung Network Manager >
    Samsung Network Manager** or double click the **Samsung Network
    Manager(** **)** icon on the Desktop.

3.  Click the Add button.

4.  Select a network location icon and enter the name of the location (e.g. Home).
    Click the **Next** button.

5.  Select **Internet direct connection** and click the **Next** button.
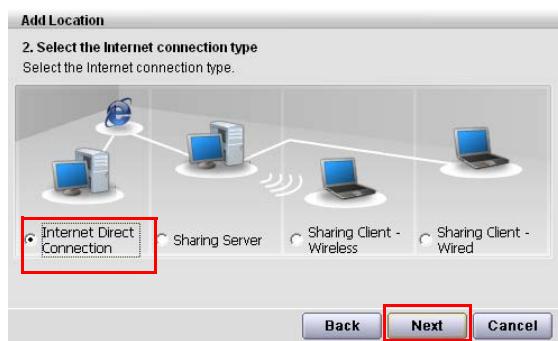


6.  Select the LAN device, setup the IP address and click the **Next** button.
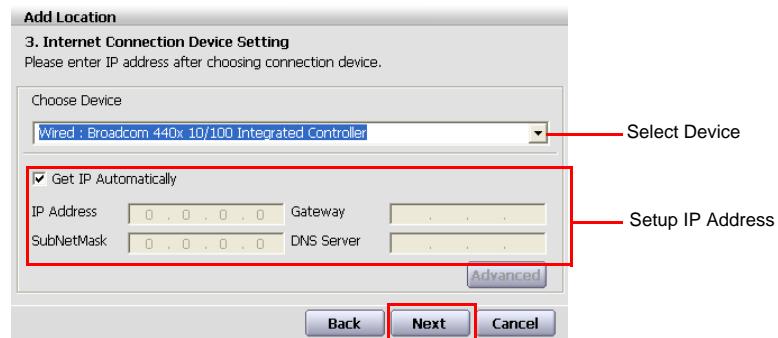


**Select Device**

Select a device to be connected to the Internet. Select either Wired LAN or
Wireless LAN.

**Setting up the IP Address**

To allocate an IP address automatically (DHCP), select **Get IP Automatically.**

To use a static IP address, unselect **Get IP Automatically** and enter an IP
address. For IP address information, ask your network administrator.

**7.** When the Printer Setting window appears, click **Finish**.
To add a printer, click **Add Printer**. The Add Printer Wizard appears. Set up the printer according to the instructions displayed on the screen.
When the printer has been added, click the **Show printer** button, select the newly added printer and then click the **Finish** button.

> To not add a printer, select **No Default Printer** and then click the **Finish** button.
>
> When the network setting is complete, the '**Do you want to move to newly added location now?**' message appears. If you select '**Yes**', the network settings for the added location are applied.
>
> When the network settings for the added location are applied, the added place and the corresponding network connection information is displayed in **The detailed Information for window**.

When the network setting is complete, an icon for the added location is created within the Saved Locations window. Now you can use the Internet or add a new network location.
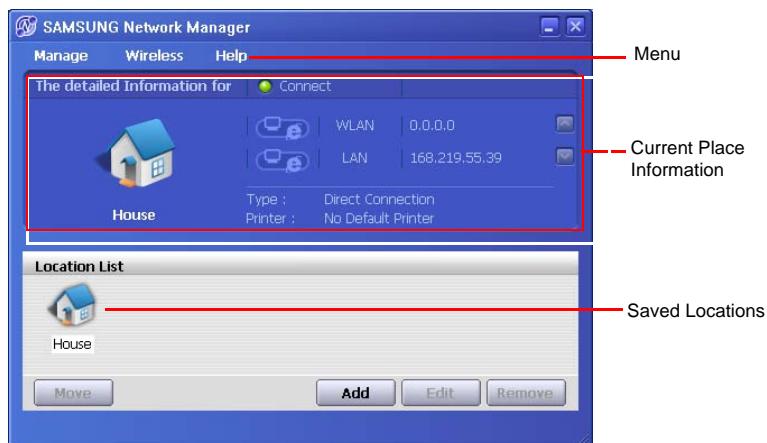


> **Wireless LAN AP Connection Procedures**
> To use a wireless LAN, first connect to a wireless LAN AP and then you can access the network even when moving location. Or moving location and then you can access the network even when connecting to a wireless LAN AP.

1. Right-click over the **Wireless Network Connection** (🖥️) icon on the Taskbar and click **View Available Wireless Networks**.

2. Click **Search AP** from the **Wireless** menu to search for wireless LAN APs.

Select an available wireless network (e.g. SAMSUNG) and click the **Connect** button. For information on available wireless LAN APs, ask your network administrator.



Available AP
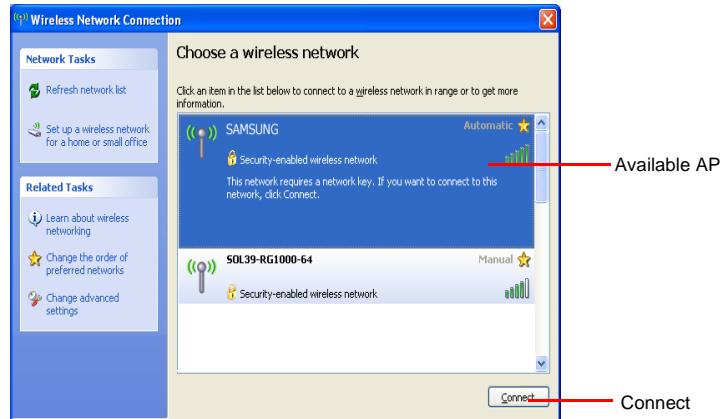
Connect

3. The network key (security key) input window appears.
- If a network key has been set for the wireless LAN AP, enter the network key and click the **Connect** button. For the network key information, ask your network administrator.
- If no network key has been set for the wireless LAN AP, click the **Connect** button without entering the network key.

4. When the computer is connected to the wireless LAN AP, the **Connected** message will appear on the Wireless Network icon in the Taskbar.

## Using the network after moving location

By setting the network settings (IP address, printer setting, etc.) for each location, you can immediately access the network without performing the network setting procedures regardless of your location.

1. Run **Samsung Network Manager** when connected to the Internet.

2. Select an icon that represents the corresponding location from the Saved Locations window and then click **Move**.

3. When the network settings of the selected location are applied, the new location and the network connection information are displayed in **The detailed Information for window**.

# Sharing Internet Access

This section describes the procedures to share Internet Access.

To share Internet Access, you first have to set a sharing server and a sharing client. When the setup is complete, you can access the Internet from the sharing client by connecting to the sharing server.

> To set up Internet Sharining Samsung Network Manager, Samsung Network Manager must be installed on both computers.

> If Internet Sharing is set up, you cannot set up a wireless LAN AP using the 'Wireless Network Connection' icon in the notification area of the Windows taskbar.
>
> To connect to a wireless LAN AP using 'Wireless Network Connection', move to another network location and connect or select **Wireless > Release Sharing Connection** from the menu and then connect.
>
> Even once Internet Sharing is canceled, Internet Sharing is automatically restored when the system restarts or wakes up from hibernation. Therefore, you have to manually cancel Internet Sharing to cancel the connection.

Although a sharing server and client can be set up in any of the 3 ways described in the reference table, we will describe the procedures for setting up a sharing server and client for Connection 1 (wired + wireless) as an example.

> **Sharing Server** : A computer with a direct connection to the internet and a local network connection.
>
> **Sharing Client** : A computer that uses the Internet by connecting to a sharing server without itself having a direct connection to the Internet.
>
> You can connect a sharing server and a sharing client as follows.(See Figure 5 on page (p90))

| | Sharing Server | | Sharing Client |
| --- | --- | --- | --- |
| | External Internet Device | Client Device | |
| Connection 1 | Wired LAN | Wireless LAN | Connect a sharing client with the |
| Connection 2 | Wireless LAN | Wired LAN | device that is the same as the |
| Connection 3 | Wired LAN | Wired LAN | client device of the sharing server. |

> To connect a sharing server and a sharing client using a wired LAN, connect the computers with a crossover LAN cable or network hub first.

To connect through a wireless LAN, press the **<Fn>** and **<F8>** key combination simultaneously to enable the wireless LAN. When the wireless LAN is enabled, the **Wireless LAN Operation LED** (( ● )) lights up.

As an example, Internet sharing procedures for **[Connection 1]**, which connect the sharing server and the Internet through a wired LAN and connect the sharing server and the sharing client through a wireless LAN, are described below.

### *Setting Up a Sharing Server*

1. Run **Samsung Network Manager** on the computer to be used as the sharing server.
2. Click the **Add** button.
3. Select a network location icon and enter the name of the location (e.g. Home). Click the **Next** button.
4. Select **Internet direct Connection for sharing** and click the **Next** button.
5. Set up the network device to be connected to the external Internet. Determine whether to use a firewall and select a network device to be connected to the external Internet (e.g. Wired LAN). Set the IP address and then click the **Next** button.
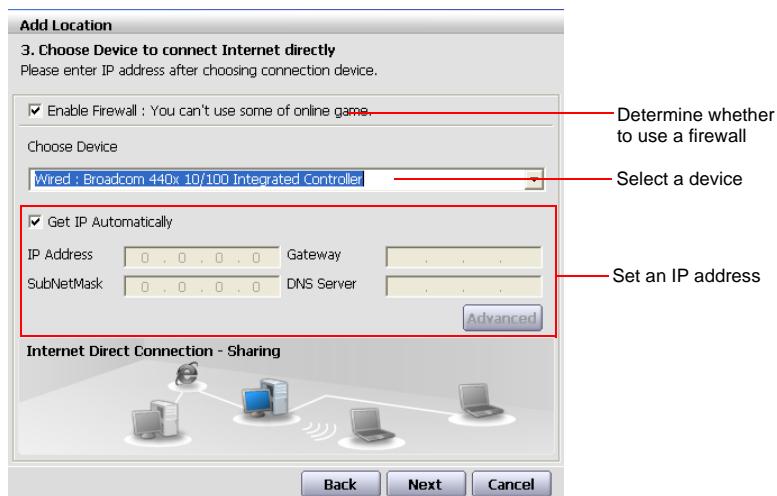


- To protect against external intrusion attempts, using a firewall is recommended.

- For more information on selecting a device and setting the IP address, refer to the description of item 6 of "Setting Up a Network" on page 89.

**6.** Select a network device to connect to the sharing client (e.g. wireless LAN) and click the **Next** button.

**To Share Internet Access through a Wireless LAN**

- In the Select Device field, select **Wireless**.

- In the **Wireless Connection Name** (e.g. Samsung) field, enter the network name.

- To use the network key (security key), select the "**Use Password ,,,**" option and enter a network key. Remember the network key because you have to re-enter the key on the sharing client to connect to the sharing server.

**7.** The setup information is displayed. Confirm the settings and click the **Next** button.

**8.** When the Printer Setting window appears, click **Finish**.
For the printer setup procedures, refer to the description of item 7 of "Setting Up a Network" on page 89
When the Shared Server setting is completed, set up the shared client.

### Setting Up the Sharing Client

**1.** Run **Samsung Network Manager** on the computer to be used as a sharing client.

**2.** Click the **Add** button.

**3.** Select a network location icon and enter the name of the location. Click the **Next** button.

**4.** Select **Internet Sharing** and click the **Next** button.

- To connect through a wireless LAN, select **Internet Sharing - Wireless**.
- To connect through a wired LAN, select **Internet Sharing - Wired**.

**5.** Confirm the network device to be connected to the server and click the **Next** button.

- To connect through a wireless LAN, enter the **wireless connection name** (e.g. Samsung) you entered in the sharing server. If you have set a network key (security key) for the sharing server, enter the network key.

**6.** The setup information appears. Confirm the information and click the **Next** button.

**7.** When the Printer Setting window appears, click **Finish**.
For the printer setup procedures, refer to the description of item 7 of "Setting Up a Network" on page 89
When the settings are completed, you can use the Internet on the shared client.

- To access the Internet from the sharing client, the sharing server has to be on.
- To use the Internet on the sharing client, select a sharing client icon from the **Location List** window and then click the **Move** button.
- If the connection is broken while using the Internet on the sharing client, click the **Ap Active** from the **Wireless** menu to reestablish the connection.

## Network Status Diagnosis

You can diagnose the network status when the network is not properly connected.

**1.** Run **Samsung Network Manager**.

**2.** Select **Auto Diagnosis** from the **Manage** menu.

**3.** The Network Connections figure window appears. Click the **Start** button to start the network diagnosis.

**4.** When the diagnosis is complete, out of order devices are marked by the exclamation mark icon. For detailed device status, read the description in the lower part of the window.
Reconnect and set up the device according to the diagnosis result.

# Using Network Services

While the computer is connected to the network, you can use network services to share files, folders, and printers.

Network services are provided for the computers that are connected to the network through wired or wireless network connections. For details, see "Connecting Through a Wired LAN" on page 77 and see "Connecting Through a Wireless LAN (Option)" on page 79.

## Sharing files or folders

This section describes how to share files and folders between computers connected to the network.

To share files, complete the following procedures:

- Step 1. Configuring the sharing of files and folders on a computer.
- Step 2. Accessing shared files and folders from another computer.

When a file or folder is shared, anyone connected to the network can open and delete the shared file or folder.
Configure a file sharing network only when the network is secure, and do not share important data.

*Step 1. Configuring Sharing*

**1.** Right-click the target file or folder to share in My Computer, and select **Sharing and Security**.
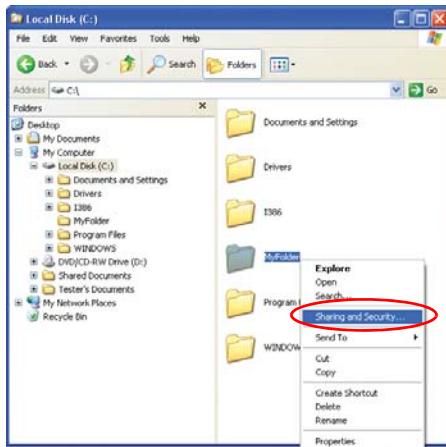


**2.** Click 'IF you understand the security risks but want to share files without running the wizard, click here'.

> It has the same security effect as that of the 'Network Setup Wizard'.
> This screen does not appear if Internet Sharing Network Wizard has been installed in the computer-to-computer wireless network environment.

**3.** Select 'Just enable file sharing', and click **OK**.
**4.** In the 'Network sharing and security' field, select 'Share this folder on the network', enter the share name, and click **OK**.

> Be cautious when selecting 'Allow network users to change my files' since other network users can change the files in the shared folder.

The file and folder sharing configuration has been completed.

## Step 2. Using Shared Files or Folders

This section describes how to access shared files or folders if your computer is a member of the same workgroup.

1.  Double-Click **My Network Places** of desktop under Other Places.
2.  Click '**View workgroup computers**', and click the desired computer to access the shared file.
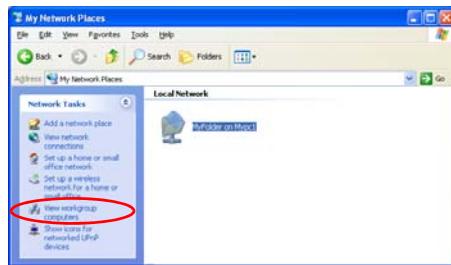


> **If your computer is a member of another workgroup:**
> 1. Click Other Places > Microsoft Windows Network.
> 2. Click the desired workgroup.
> 3. Click the desired computer to display the shared files or folders.

## Sharing Printers

This section describes how to share a printer between computers connected to a network.

To share a printer, complete the following procedures:

- Step 1. Configure printer sharing in the computer connected to the printer.
- Step 2. Add and use the shared printer in other computers on the network.

## Step 1. Configuring Printer Sharing

1. From the computer connected to the printer, click **Start > Printers and Faxes**.
2. Right-click the printer you want to share, and click **Sharing**.
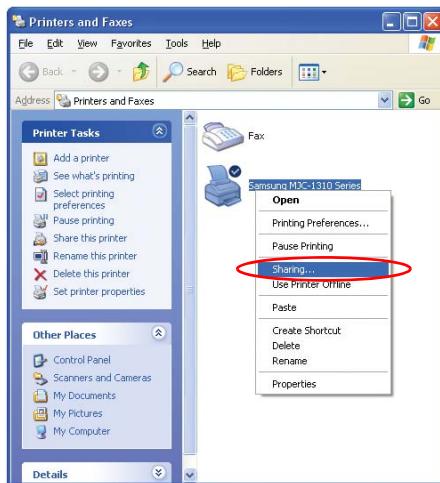


3. Select 'Share this printer', enter a share name for the shared printer, and click **OK**.
4. In the Printers and Faxes window, you will find the printer icon has been changed to another icon on a hand.



## Step 2. Adding and Using a Shared Printer.

1. From a different computer that wants to use the shared printer, click **Start > Printers and Faxes**.
2. Click **Add a printer**.
3. In the Add Printer Wizard, click **Next**.
4. Select 'A network printer, or a printer attached to another computer', and click **Next**.
5. Select 'Browse for a printer', and click **Next**.

**6.** Select the workgroup or computer, select the desired printer, and click **Next**.
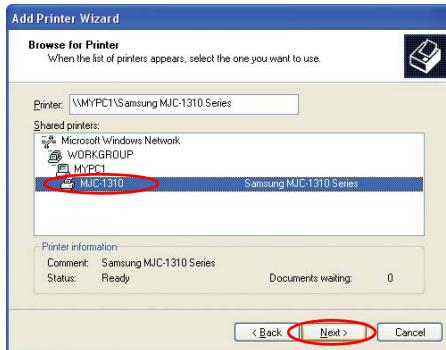


If you cannot find the desired printer, try again after a while.

**7.** Read the warning about a shared printer, and click **Yes** to install the shared printer.

**8.** Select **Yes** for 'Do you want to use this printer as a default printer?', and click **Next**.

**9.** Click **Finish**.

**10.** When the printer sharing configuration has been completed, the shared printer appears in the Printers and Faxes window.



Now you can print using the shared printer even if your computer is not directly connected to a printer.

# Using Bluetooth Devices (Optional)

Bluetooth is a wireless communication technology that allows access to devices nearby such as a computer, mobile phone, printer, keyboard or mouse without a cable connection. Bluetooth enables file transmissions, Internet access, a private area network function, and access to a keyboard, mouse and printer between devices supporting the Bluetooth function without a cable connection.

> The Bluetooth function is only available between devices supporting Bluetooth (computers, mobile phones, PDAs, printers, etc.), and the function may be restricted depending on the device profile.
>
> The Bluetooth function is optional and may not be supported depending on your model.
>
> To use Bluetooth, press the **Fn+** $\boxed{F8}$ key to turn the Bluetooth function on. If the Bluetooth function is turned on, the **Wireless LAN LED** lights up.

## *Bluetooth Functions*

- **File Transmission (  )**

  You can exchange files between 2 Bluetooth devices. You can exchange files with other computers, mobile phones, PDAs, etc.

- **Network Access (  )**

  You can connect to another computer with the Bluetooth function as you access a wireless LAN in Ad-Hoc mode or connect to the Internet through an AP or Internet Connecting Sharing Server.

- **Network Access through a Phone Connection (  )**

  You can connect to the Internet through a Bluetooth mobile phone.

- **Data Sync (Synchronization) (  )**

  You can synchronize the PIMS data (Outlook E-mail address data) with mobile phones, PDAs, notebook computers, etc. supporting Bluetooth.

- **Electronic Business Card (Vcard) Exchange (  )**

  You can exchange electronic business cards with mobile phones, PDAs, notebook computers, etc. supporting Bluetooth.

- **Sound Output (  )**

  You can listen to audio from the computer through another Bluetooth device or listen to audio of another Bluetooth device through the computer.

- **HID Connections ( )**

    You can connect a keyboard, mouse, joystick, etc. supporting Bluetooth.

    For more information about using the Bluetooth function, refer to the online help of the Bluetooth Device.

## Bluetooth Software Setup

Bluetooth software is installed on some models. To use the Bluetooth function, you have to setup the Bluetooth software first. Set the software up as follows when using the function for the first time.

**1.** Right-click the **Bluetooth** icon( ) on the bottom right Taskbar using the mouse(or touchpad) and select **Start Using Bluetooth** from the pop-up menu.
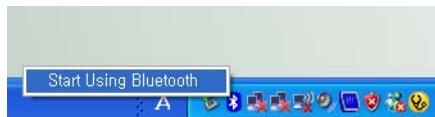


**2.** Click the **Next** button to start setting up.

    In the setting up steps, enter a device name to be displayed in the Bluetooth Manager program. Enter a **Name** in the Computer Name field and select **Laptop** for the Computer Type field.

    Also, a step appears for selecting the services to be provided by your Bluetooth device for other Bluetooth devices. At this point, the program automatically detects available services and displays them as selected. It is recommended not to change the default selection.
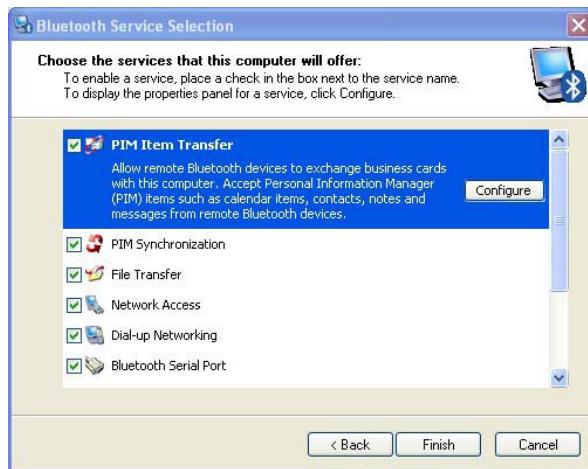
If you change the service settings, the driver necessary for the additionally selected services are installed.

At this point, a warning message may appear informing you that there is no Microsoft logo. Since it does not affect the operation, continue the installation.

**3.** If the driver installation is complete, the next step proceeds which searches for nearby Bluetooth devices. Since you do not have to search while setting up, click the **Skip** button and finish the settings.

**4.** When the settings are complete, the **Bluetooth** icon menu of the notification area changes as shown in the figure.



## Using Bluetooth

Describes how to exchange files between computers supporting Bluetooth and how to use other Bluetooth devices.

### Bluetooth Help

Bluetooth Help provides detailed procedures on using Bluetooth functions.

Click on **My Bluetooth Settings** on the **Desktop** and press the **F1 key** (Help).



Select Start > Help and Support > Networking and the Web > Networking > Wireless networking > Bluetooth devices (wireless) to view Windows Help.

## *Exchanging Files between Bluetooth computers*

The procedures to exchange files and folders between Bluetooth computers are described below.

**1.** On the computer that is sending a file (hereafter Computer A), right-click the **Bluetooth icon** ( ) in the notification area and select **Quick Connection > File Transmission > Search for Device**.



**2.** In the Select Device window, click on a computer to be connected (hereafter Computer B).
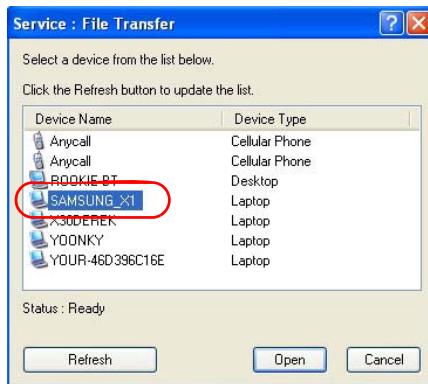
**3.** If the **Bluetooth PIN Code required** dialog box appears, click the message box, enter the **Bluetooth PIN Code** and click the **OK** button.



The **Bluetooth PIN Code** is a password used for the connection between two Bluetooth devices, the user just enter the same PIN Code (E.g. same numbers) on both Bluetooth devices to make a connection.

**4.** After a short while, the **Bluetooth PIN Code required** dialog box appears on Computer B, enter the code that you have entered in Step 3 above.

**5.** If the FTP File Access Privilege Request window appears on Computer B, click on the window. If the Select Access Permission window appears, click the **OK** button.

**6.** The File Transmission window appears on Computer A. Drag and drop a file or folder to be transmitted over this window.
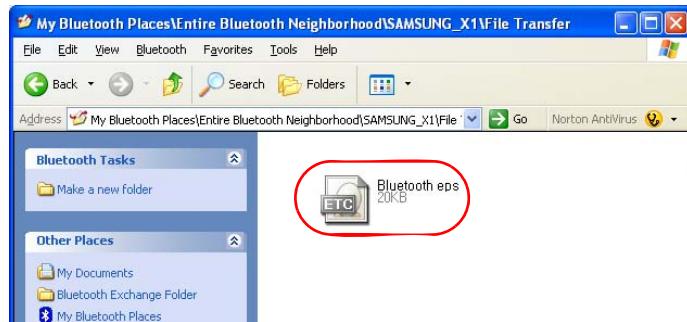


**7.** If the file transmission is complete, close the File Transmission window.

## Connecting Keyboard, Mouse, Joystick and Headset devices

The procedures to use Bluetooth HID devices (keyboard, mouse, joystick, etc.) or a headset, etc. on the computer are described below.

> The Bluetooth PIN Code is a password used for the connection between two Bluetooth devices, the user just enter the same PIN Code on both Bluetooth devices to make a connection.

1. Turn on the Bluetooth function on the device to connect to (mouse, keyboard, joystick or headset).

   Some devices have a button to turn on the Bluetooth function, so refer to the corresponding device manual.

2. Double-click on the **My Bluetooth Settings icon** ( ) on the Desktop.

3. If the **My Bluetooth Settings** window appears, click on **View Devices within Coverage**.

   If the device to connect to appears, click on the device. (E.g. mouse)
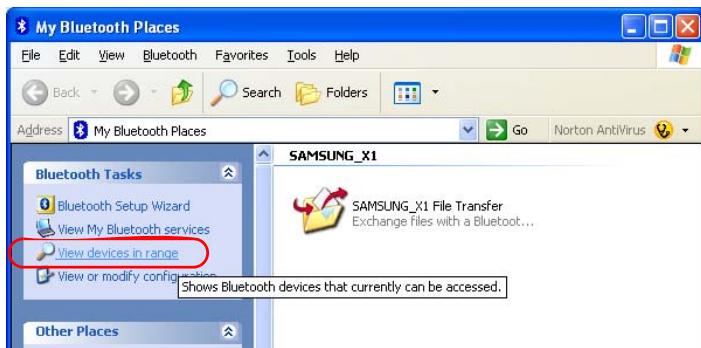


> If the device does not appear, click the **View Devices within Coverage**. If the device has not appeared yet, since this menu changes to **Search Devices within Coverage**, click the **Search Devices within Coverage** to show the device.

4. If the **Bluetooth PIN Code** input window appears, enter a PIN code referring to the manual of the corresponding device. The PIN code for an HID device is generally printed in the manual of the corresponding device.

5. If you enter the PIN code, you can immediately use the device.

A Bluetooth keyboard and mouse work only in Windows. They will not work in MS-DOS mode or in Hibernation mode.

## *Use Instructions*

- Bluetooth devices must be within a 3m distance.

- For a better communications environment, use the devices in an open space where no wall or obstacle exists.

- For a telephone connection, data synchronization, electronics business card exchange, fax transmission/reception, sound related functions, and serial port function, you can connect with only one Bluetooth device.

- Using the network connection or file transmission function, multiple Bluetooth devices can be connected. However, since connecting with multiple devices may slow down the data rate or make the connection unstable, connecting with one device at a time is recommended.

- The Bluetooth function of a Bluetooth PDA, mobile phone, mouse or keyboard may be turned off. To use them in connection with a Samsung computer supporting Bluetooth, you must check if the Bluetooth function of the device to connect to is turned on.

  For the procedures on turning on the Bluetooth function of a device, refer to the manual of the device.

- The services provided by Bluetooth devices may vary depending on their capability. For the services provided by Bluetooth devices, refer to the manual of the device.

# Customizing Your Computer

## Using System Setup

The System Setup (BIOS) program enables you to configure your computer hardware and set security and power-savings options. The settings you choose are stored in battery-maintained CMOS memory that saves the information even when the computer's power is turned off. When your computer is turned back on, it is configured with the values found in this memory.

Run System Setup if you get a message prompting you to run the program. You may also want to run System Setup, particularly the first time you use your computer, to set the time and date, use security or power-management features, or alter the settings of other features.

**BIOS Caution:**
If you are not familiar with BIOS setup and what the parameters mean, seek help from a person who is knowledgeable. Incorrect settings may cause your system to malfunction or "Crash".

Your computer's version of System Setup may not include all the fields listed here or may include additional fields. Field names and order of appearance can vary according to the version of the BIOS (basic input/output system) on your computer.

# Starting System Setup

To start System Setup, turn on your computer and then press **\<F2\>** and hold until the System Setup screen appears.

*Table 2.  System Setup Menus*

| Menu | Function |
| --- | --- |
| **Main** | Changes the basic system. |
| **Advanced** | Configures advanced features on your computer. |
| **Security** | Enables security features, including passwords. |
| **Boot** | Specifies the order of boot devices and configures boot features. |
| **Exit** | Specifies how to exit System Setup. |

To open the menu you need to use, use the left or right arrow keys to select the menu name.

*Table 3.  System Setup Navigation Keys*

| Navigation Key | Function |
| --- | --- |
| **\<F1\>** | Displays the General Help window. |
| **\<Esc\>** | Exits the current menu. |
| **\< ↑ \> or \< ↓ \>** | Moves the cursor up and down between fields. |
| **\< ← \> or \< → \>** | Selects different menus. Pressing the **\<Esc\>**key at the Main menu brings you to the Exit menu. |
| **\<F5\>** | Scrolls backwards through the options for the highlighted field. |
| **\<F6\>** | Scrolls forward through the options for the highlighted field. |
| **\<F9\>** | Sets the parameters for the current menu to their default values. |
| **\<F10\>** | Save changes and exit system setup. |
| **\<Enter\>** | Executes commands or opens a submenu. |

# Changing Booting Priority

You can select the booting priority among the devices such as the hard drive, CD-ROM drive, etc. The following example describes how to configure the hard drive as the first booting device when the CD-ROM drive is configured as the first booting device by default.

1. Select the **Boot** menu in System Setup.
2. Press **<Enter>** on **Boot Device Priority** item.
3. Use < ↓ > key to move to the **Hard Drive** item, and press **<F6>** until it is at the very top.
4. Press **<F10>** to save the changed configuration, and exit System Setup.
   Now you can boot the system with the hard disk drive as the first booting device.

# Configuring the Password

## Setting the Supervisor Password

By configuring a supervisor password, you can restrict system access to authorized users only.

Do not lose or forget your password. If you have forgotten your password, contact the Samsung service center.

1. Select the Security menu in the System Setup. To enter System Setup, see "Starting System Setup" on page 111.
2. On the **Set Supervisor Password** item, press **<Enter>**.
3. Enter a password, press **<Enter>**, re-enter the password for confirmation, and press **<Enter>** again.
4. When a message confirming the password configuration appears in the [Setup Notice] window, press **<Enter>**.

## Setting the User Password

You can configure user passwords so that other users can use the system.

Before configuring a user password, a supervisor password must have been configured.
Users can start the system with their user password, but cannot enter into the System Setup.
Deactivating the supervisor password also deactivates the user password.

On the **Set User Password** item, press **<Enter>**, and complete step 3-4 of "Setting the Supervisor Password".

## Activating the Booting Password

Before activating the booting password, the supervisor password must have been configured.

Set the **Password on boot** option to [Enabled].

From now on, system booting will not proceed without the password.

## Deactivating the Password

1. On the password to delete, press **<Enter>**. (e.g. supervisor password)
2. Enter the current configured password, and press **<Enter>**.
3. Leave the 'Enter New Password' and 'Confirm New Password' field empty, and press **<Enter>** to deactivate the password.

# Configuring Resolution and Color Depth

Screen resolution is the number of pixels displayed on the screen. High resolution makes the overall screen area large, although individual items appear small. Color quality is determined by the number of bits used to represent a pixel on the screen. High color quality displays more number of colours on your screen.

1.  Select **Start > Control Panel > Appearance and Themes > Change the screen resolution**.

2.  Make changes on the **Settings** tab of the [Display Properties] dialog box.

You can view the graphics chipset.

To change your screen resolution, move the slider to select an appropriate resolution.

To change the number of colors displayed on a monitor, select an appropriate colour quality.
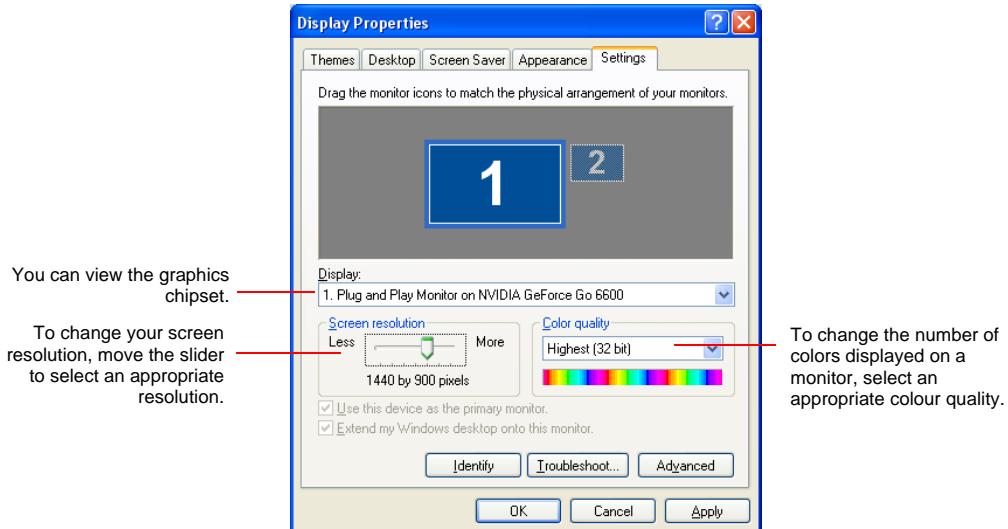
**Graphics Chipset Information**

You can view the installed graphics chipset in the Display Properties window.

- Nvidia Geforce Go 6600 (NV43M)

3.  When you have completed configuration, click **Apply**.

The following resolution and color quality settings are recommended depending on the LCD screen of the system.

WSXGA+(19"): Screen resolution: 1680 x 1050, Color quality: Very high (32bit)

# Using External Display Devices

Using external display devices such as monitors, projectors, TVs, etc allows you to view screen images alternatively or simultaneously on each device. Additionally, you can extend the screen onto two display devices to use a larger workspace. Using external display devices is especially useful when you are giving a presentation or watching a movie through your TV.

## Switching Display Devices Using the Shortcut Key

You can watch the screen through either the LCD or an external display device, or you can even watch the screen through both the LCD and an external display device simultaneously.

1.  Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system. To connect a TV, connect the TV to the TV output port of the system.

2.  Press the **<Fn>**+**<F4/ ▤|▢>** keys. Provided that an external display device is connected, the display option changes in LCD > CRT > LCD+CRT order whenever the **<Fn>**+**<F4/ ▤|▢>** keys are pressed.

> When multiple display devices are connected, pressing the **<Fn>+<F4 / ▤|▢>** keys displays a picture on the LCD > CRT > TV > LCD+CRT > LCD+TV, in this order.
>
> In the MS-DOS environment, the picture is displayed to the LCD > CRT, in turns, and output to a TV/DVI is not supported. In full screen MS-DOS mode of Windows, you cannot change the display device by pressing the shortcut key.

## Using Dual View to View Extended Screen

You can expand the screen into two display devices and work conveniently in separate workspaces.

In Dual View mode, you can select the screen resolution and colour quality for each display device, as if there were two separate graphics cards.

1. Connect the external display device (e.g. a monitor or a projector) to the corresponding port of the system. To connect a TV, connect the TV to the TV output port of the system.

2. Press touchpad right button on the desktop, click **Properties**, and then click the **Settings** tab.

3. Click the monitor '**2**' icon, select the 'Extend my Windows desktop onto this monitor' check box, and then click **Apply**.
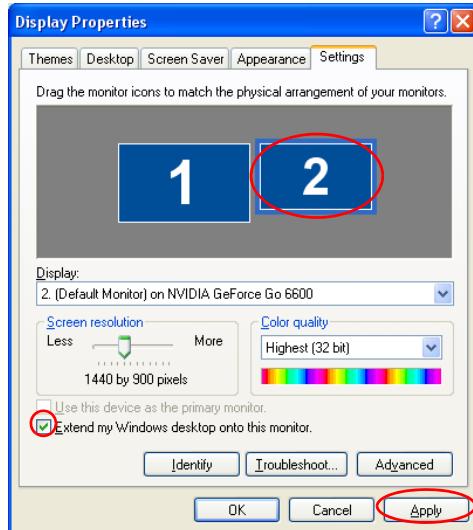


4. When the configuration is complete, click **Identify** on the left side of Troubleshoot. The primary display device(the LCD) is indicated as '**1**', and the

secondary display device is indicated as '**2**'. Now you can view the screen through two monitors.



1 : Primary                              2 : Secondary

When you use Dual View, configuring the LCD as the 'Primary' monitor is recommended.

If the screen of the secondary display device is displayed at 640x480 pixels, with 256 colours, change the settings to the desired screen resolution and colour quality in the [Display Properties] dialog box.

## Deactivating Dual View Mode

Click the monitor '**2**' icon, clear the 'Extend my Windows desktop onto this monitor' check box, and then click **Apply**.

**To move a window between display devices in Dual View mode**
Click the title bar of the window in the primary display device (1, the LCD), and drag it to the secondary display device (2). The window is moved to the secondary display device.

# System Management

## Using Power Management Options

Your computer includes **Power Management** options that can help the battery charge last longer and extend the life of the battery. Power-management options will slow down or shut off system components when the components are not being used.

Power management may slow down system performance. Your computer runs fastest with the power cord attached, whereby power management is disabled.

In the next sections, basic and advanced methods of power management will be discussed.

### Basic Power Management Schemes

This section discusses the basic schemes of power management when the computer is operating on battery power or using AC power.

**Standby vs. Hibernation**
Hibernation is a state where the contents of memory are stored in a special file on the hard disk, and Standby simply keeps a small holding current through the memory to keep the data. You are more likely to sustain loss of data in Standby mode so it is recommended to save all open files before entering Standby.

**Changing Devices:**
Do not change PC Cards while in standby or hibernate modes.

**To enter the power management window complete the following:**

1.  Click **Start** > **Control Panel** > **Performance and Maintenance**.
2.  Click icon to display the **Power Options Properties** window.

**3.** Click the **Power Schemes** tab to display the basic power management options.
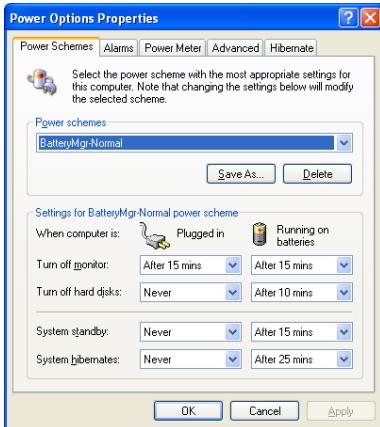


By default, the power scheme is configured to BatteryMgr-normal mode. BatteryMgr-normal mode extends the battery life and optimizes the Intel Speedstep function. Since the CPU power consumption is automatically optimized to conserve power when the computer is operating on battery power, an application may be executed slower than when it is operating on AC power.To use BatteryMgr-normal mode after reinstalling Windows, install the Battery Manager program using the system software Media.

**4.** Select the time that you wish each of the following actions to occur in **Battery** and **AC power** mode.

- Turn off monitor
- Turn off hard disks
- System standby
- System hibernates

Turning off the monitor and HDDs will save a substantial amount of battery power, therefore when in battery only mode select the shortest time practical.

You can also reserve Turning Computer Off, Hibernation state, Hold Mode, etc. by selecting **System > Computer Scheduling** in the EasyBox program. (see "Using EasyBox" on page 40.)

If you change the power settings in the Battery Manager program, the settings of the '**Power Options Properties**' window are automatically changed accordingly ('Using the Battery Manager' (p127)).

**Hibernate Mode** (*Power Management or Manual Method*)

When hibernation is used, your computer turns off and when you power up again, everything is restored exactly as you left it—including programs and documents you may not have saved or closed. Everything in memory gets saved to the HDD, and the monitor and hard disk get turned off.

**If You Reinstall Windows:**
You should re-establish hibernate in power options by opening **Power Options Properties** window and click on the **Hibernate** tab then click "Enable Hibernation".



Hibernate Tab
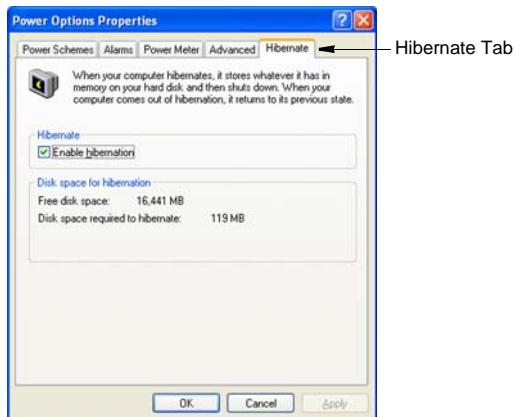
**Frequent Interruptions:**
If you experience frequent interruptions, you might also consider putting your computer into automatic hibernation after a specified number of minutes using the power management options.

**Standby Mode** (*Power Management or Manual Method*)

Standby is used mainly for conserving battery power in your notebook computer. It also gives you the benefit of getting right back to your work without waiting for the computer to restart. Standby turns off your monitor and hard disks, placing your entire system in a low-power state. When you return to your computer, restores your desktop exactly as you left it. It is recommended that you do not enter standby mode with less than 20% battery power.

**5.** Click **OK** to set your power management options and close the window.

**Rest Key:**
The manual **<Fn+**Esc/ 🌙 **>** key combination will not activate Standby or Hibernate modes while you are playing a multimedia program or have an active USB device connected.

## Advanced Power Management Schemes

This section discusses the advanced power management schemes. There are two buttons that you can use to manually conserve power.

**To enter the power management window complete the following:**

**1.** Click **Start** > **Control Panel** > **Performance and Maintenance**.

**2.** Click 🖳 icon to display the **Power Options Properties** window.

**3.** Click the **Advanced** tab to display the advanced power management options.



Advanced Tab

Power & Sleep Button
Programming Windows
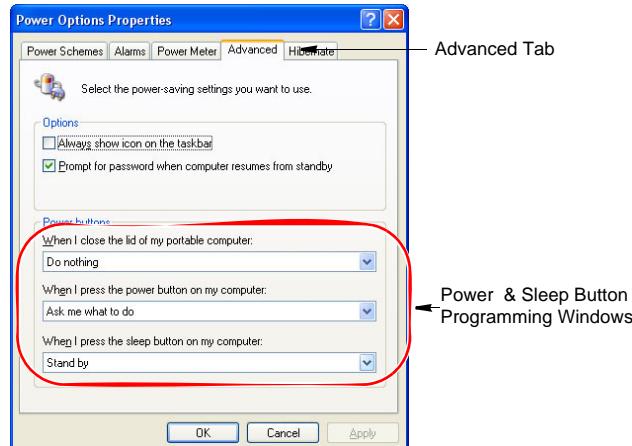
**4.** Select the mode (**Do nothing/Ask me what to do/Standby/Hibernate/Shut down**) assigned to the Power button and/or Rest <Esc/ 🌙 > key. Also select the action (**Do nothing/Standby/Hibernate**) associated with closing the computer lid.

> The "Rest" key is assigned to the <Fn+Esc/ 🌙 > key combination. "Basic Power Management Schemes" on page 119 for a better understanding of Standby and Hibernate modes.

**5.** Click **OK** to set your power management options and close the window.

You can return to normal operation after you have used one of the "Power Management" buttons by quickly pushing and releasing the **Power** button.

# Using the Battery

Please refer to the following instructions when running the computer on battery power without connecting the AC power.

> Please read the instructions on the battery before use.
>
> Please refer to the system operation environment (p165) of this manual and operate and store the battery at room temperature.

## Ejecting and Attaching Battery

1. Shutdown the system and close LCD.

2. Put the computer upside down on a flat surface.

3. Pull the two battery latches outward.(         ), then remove the battery.
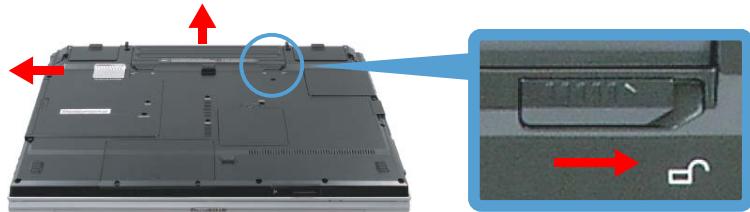


4. To install the battery again, slide the battery into the system as below. The battery latches move inward, and fix the battery automatically.

## Monitoring the Battery Charge

You can view the battery charge status by completing the following procedures.

### To use the shortcut key to view

Press the Fn+ [F2] key on the keyboard to display the remaining battery charge on the screen for a brief moment.

### To view on the battery

Click the PUSH button on the battery. The remaining battery charge (%) will be displayed.



Push button
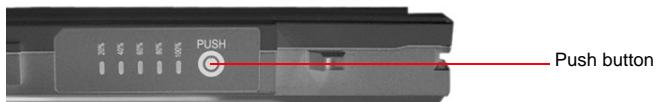
### To view through the Control Panel

Select **Start > Control Panel > Performance and Maintenance > Power Option > Power Measure** tab.Then you can view the current power source and the current remaining battery charge.



Power Supply Status

Remaining Battery Charge
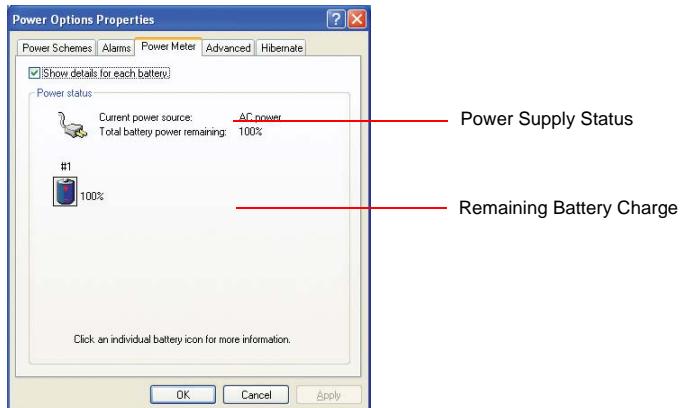
**Using the battery**

Battery is an expendable supply, so when you use it for a long time, the capacity/battery life is shortened. If the battery life is reduced to under half of the initial time, we recommend that you purchase a new battery to use.

**Battery Warning**

You will hear an alarm when the remaining battery charge is under 10%. Connect the power cable or turn off the computer and install a fully charged battery.

When the remaining battery charge is under 3%, the computer automatically saves current work and turns off. This may be different according to the settings in **Control Panel > Performance and Maintenance > Power Options > Alarms** tab.

## Extending the battery use time

### *Decreasing the LCD Brightness*

Decreasing the LCD brightness by pressing the <Fn>+< ☼▼ > key combination on the keyboard or adjusting the brightness in the Battery Manager program extends the battery use time.

Decreasing the LCD brightness by one level extends the battery use time by 3~5% (10~20 minutes). (The battery use time is determined by the corresponding model.)

## Using the Battery Manager

Battery Manager is a power management program that enables using battery power efficiently.

You can easily change the power mode by selecting an optimized power mode and manually optimizing the battery use time by setting each option.

Click on **Start > All Programs > Samsung > Samsung Battery Manager > Samsung Battery Manager.**



You can only change the detailed configuration in **Custom Mode**.

Change Power Mode

Power Saving Effects

- **Maximum Battery Saving Mode** : This mode is appropriate for conditions which require the maximum battery use time. This may degrade the performance of the system.

- **Normal Mode** : This mode is appropriate for normal conditions. Both system performance and battery use time are optimized.

- **Maximum Performance Mode** : This mode is appropriate for conditions that require maximum system performance.Therefore, the battery usage time may be reduced in this mode.

- **Custom Mode** : In this mode, a user can configure a detailed configuration to save the battery usage time. You can adjust the LCD brightness, the system standby time, the screen color quality, and the graphic mode values.

**Power Saving Effect**

This shows the relative battery use time for each power mode. The more effective the power saving, the longer the graph will appear.

**When Running a Game or Multimedia Application**

A game or multimedia application may not work smoothly in Maximum Battery Saving Mode. Using this is recommended when the AC adapter is connected or in Normal or higher modes.

### Turning Off Unnecessary Devices

Turning off unnecessary devices extends the battery use time.

Select the **Start > Control Panel > Performance and Maintenance > System > Hardware** tab and click **Device Manager.** Right-click a device you are not using, and select 'Disable' (e.g. wireless LAN,  1394 , etc.)

### Battery Calibration

If you charge/discharge the battery repeatedly for only a short time, the battery use time may be reduced by the difference between the actual battery charge and the remaining charge display. In this case, the actual battery charge and the remaining charge display will be same by discharging the battery completely using the Battery Calibration function, and then recharging it again.

1. Disconnect the AC power adapter after turning off the system.
2. Restart your computer and press **<F2>** to enter BIOS setup.
3. Using the arrow keys, highlight Smart Battery Calibration in the Boot menu. The Battery Calibration function is activated and the battery is discharged forcibly. This operation requires 3~5 hours depending on the battery capacity and the remaining battery charge.
4. When the calibration process is complete, recharge the battery fully.

# Upgrading Memory

This computer has one or more 512 MB memory module(s). Two memory module sockets are provided so that you can replace memory or install an additional memory module.

## Removing the memory module

Before removing/replacing the memory module, turn the system off completely and remove the battery. Do not replace the memory module when the system is in Standby/Hibernate mode.

1.  Using a screwdriver, open the memory module compartment cover on the bottom of the computer.



screw
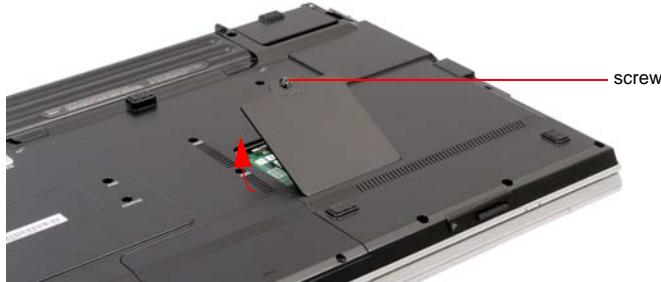
2.  Push the memory module tabs outward to pop the memory module upwards. Carefully pull the module out at an angle of about 30°.
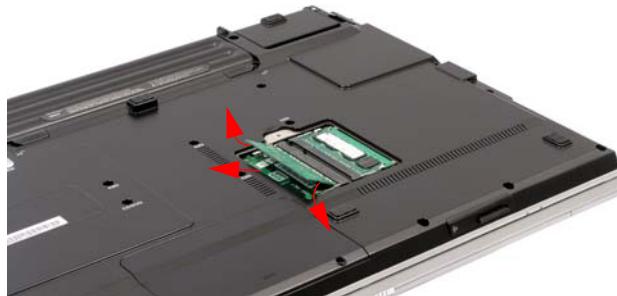
## Adding a memory module

1. Align the new memory module connectors accordingly and slide it into the slot at a 30° angle.

Ensure the notch on the memory module corresponds with the notch on the socket.

2. Push the memory module in until the module clicks into place. If the memory module is not fixed completely, gently push the memory down while pressing the memory module tabs outward.
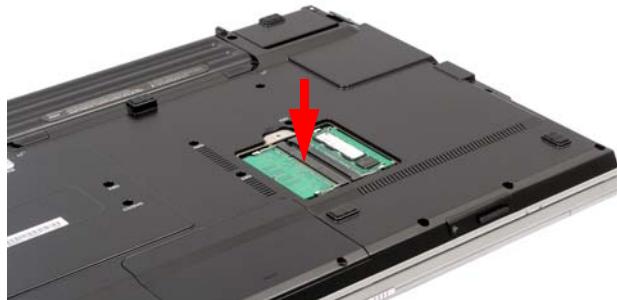
3. Close and fix the memory module compartment cover using a screwdriver.

# Using the Security Lock Port

The security lock is a device used to physically 'fix' the system when using it in a public place. The locking device needs to be purchased separately. The shape and methods of use may differ depending on the manufacturer. Please refer to the manual provided with the security lock for proper use.

1. Connect a security lock cable to a fixed object.
2. While holding the security lock port lever to the left, connect the cable to the security lock port.

Any damage to the machine caused by using a locking / security device is not covered under warranty.

# Tips for Using Your Computer

The following information helps you avoid potential problems as you use your computer:

Do not try to disassemble your computer. Opening the system chassis voids your warranty. Only an authorised manufacturer service center can replace or add any parts inside the chassis.

- Follow all the instructions and cautions in your computer user documentation.

- The LCD has a polarized surface and can be damaged easily. To prevent damage, avoid touching the screen.

- Use only approved AC adapters, auto adapters, memory modules and other options.

- Because a notebook computer is small and has restricted air flow around components, it is more likely to overheat than a desktop computer. A fan inside your computer runs when needed to help eliminate heat. Make sure the fan vent on the left side of your computer is not blocked when you use the computer. Occasionally check the vents and remove any accumulated dust on the outside.

- Avoid using or storing the computer in extremely hot or cold areas, such as a car on a hot day. Keep the computer away from heaters and out of direct sunlight. Exposure to excessive heat may damage computer components. If you have left your computer in a hot place, let it cool down slowly to room temperature (with the LCD panel open) before using it.

- Do not remove the memory-module compartment door, or try to install a memory module when the computer is on.

- Set up your computer work area to avoid physical strain. Sit with your back straight and supported by your chair. Adjust your chair or work table so that your arms and wrists can remain in a relaxed position, parallel with the floor. Avoid bending or twisting your wrists as you work. Your hands should "float" slightly above the keyboard. Refer to a book on office ergonomics for more information on setting up your work area.

- Take frequent breaks from working at the computer to rest your eyes and stretch your muscles.

- Remember to save your data files frequently and to make backup copies of your files.

# Travelling with Your Computer

## Air Travel

**If you are travelling by air, follow these tips:**

- Take the computer with you as carry-on luggage. Do not check the computer with your baggage.

- Allow the computer and disks to go through the X-ray security devices. Do not hand-carry disks through the walk-through metal detectors, which can cause loss of data.

- Be prepared to turn off the computer during take off and landing.

# Handling Spills

Do not spill anything on your computer. The best way to avoid spills is to avoid eating and drinking around your computer. If you do spill something on your computer, turn off your computer, unplug it immediately, and do the following:

- If you spill liquid on the keyboard, drain as much of the liquid from the keyboard as possible. Be careful not to let the liquid drip onto the LCD panel. Allow the system to dry for several days before trying to use it.

- If you spill liquid on an external keyboard or keypad, unplug it and drain as much of the liquid as possible. Allow the keyboard to sit at room temperature for a full day before trying to use it.

> Sweet liquids leave a sticky residue that may jam the keyboard despite your efforts to dry it.

- If you spill liquid on the LCD panel, clean it immediately with a soft cloth and denatured alcohol or a proprietary LCD screen cleaner. Do not use water, window cleaner, acetone, aromatic solvent, or dry, rough towels to clean it.

> Some liquids damage the polarized LCD screen. If your screen is damaged, contact your authorized manufacturer's service center for a replacement.

## Storing the Computer for Long Periods

If you will not be using the computer for a long period of time (a month or more), you should discharge the battery completely then remove the battery from the computer. This extends the life of the battery.

# Troubleshooting

Complete the following in the order presented until your system is functioning properly. If all of the steps below fail then contact your local reseller for assistance.

▶ *Questions and Answers*

Please see "Questions and Answers" on page 136 for assistance in correcting any computer operational problems.

▶ *Check the Connections*

Verify all of the power and peripheral cables are securely plugged into their sockets and that your system and power supply is on.

▶ *Norton AntiVirus*

Run Norton AntiVirus to ensure a virus is not affecting your computer.

**To run Norton AntiVirus proceed as follows:**

Click **Start > All Programs > Norton AntiVirus > Norton AntiVirus 2005**.

▶ *Windows Help and Support*

Run Windows Help and Support to find problem that may be affecting your computer.

**To run Windows Help and Support proceed as follows:**

Click **Start > Help and Support.**

▶ *Frequently Asked Questions*

To view FAQ's on your computer, please visit www.samsungpc.com.

▶ *Reinstalling Software*

If for some reason your system crashes you may corrupt your HDD, Windows operating system and/or some of your device drivers. If this is the case, use **System Recovery CD** to reinstall **OS** and **System Software Media** to reinstall the corrupt device drivers.

**System Recovery Precaution:**
Before you start restoring your windows operating system insure you backup all data on your hard drive.
*Samsung* is NOT responsible for any data loss.

# Questions and Answers

This section provides information on possible problems, solutions and other references for system use.

## Windows Related

**Q1    The system does not shutdown properly.**

**A**    When the system does not shutdown normally, press and hold the Power button until the system manually shuts off. If the Power-Saving Mode is configured into the Power button, press and hold for more than 4 seconds to shut the system off. When the system is turned on after such manual shutdown, Scandisk will run to check errors in the system.

**Q2    The system freezes during program operation**

**A1**    There is an error with the program currently being used. Press the <Ctrl>, <Alt>, and <Delete> keys simultaneously and click End Task in the [Windows Task Manager] window.

**A2**    There is an error with the Windows OS. Reboot the system by using the Power button.

## Display Related

**Q1    The LCD screen is too dark or too bright**

**A**    Adjust the LCD screen brightness. Use the **<Fn>**+< ☼▼ >, **<Fn>**+< ☼▲ > keys.

**Q2    The screen saver disturbs screen viewing during Media Player or video file operation.**

**A**    Unselect Tools > Options > Player > Allow screen saver during playback in the Media Player.

**Q3  In DOS mode, changing the full screen DOS mode by pressing <ALT>+<Enter> key displays a broken image for a short period.**

**A**  The DOS mode which supports 2 Byte characters such as Korean and Japanese runs in graphic not in text mode. In this case, a broken image may be displayed while changing the video mode settings.

**Q4  In the following cases, the screen blinks or displays noise for a short time: (Click the Graphics Related tab, Change Resolution, Change Display Device, Remove the AC Adapter, Restart the System, Change PowerMizer level.)**

**A**  This may happen while the video driver is examining the connected device. While detecting, any connected display devices may blink or some noise may occur.

**Q5  The desktop momentarily appears as a broken image when zooming in or out of the Media Player screen when Media Player is running.**

**A**  Since zooming in or out of the Media Player screen changes the screen resolution, the desktop may momentarily appear as a 'broken image' during this operation.

**Q6  The playback screen of a DVD title or an MPEG file is only displayed on the LCD.**

**A**  Video is displayed on a single display device by default, when LCD and CRT are selected simultaneously.

1. Right-click over the Desktop and select Properties from the pop-up menu.

2. In the [Display Properties] window, select the Settings tab > Advanced > GeForce Go 6600 tab.

3. Select the Full Screen Video menu> Full Screen Video Control item, set the Full Screen Device to 'Auxiliary Display' and then click the Apply button. Then you can view video on both the LCD and CRT display devices.

**Q7  After connecting to a TV, some programs such as Debug, Mem, etc. do not run in full screen MS-DOS mode.**

**A**  If a TV is used as the display device, some programs such as Debug, Mem, etc. may not run properly in full screen MS-DOS mode. Run the programs in the MS-DOS window.

**Q8 Switching to full screen by pressing the <Alt>+<Enter> keys while playing a music file using Media Player temporarily stops the sound.**

**A**     Zooming in or out of the Media Player screen changes the screen resolution. The sound may stop while the screen resolution is switched. Zoom in or out of the Media Player screen before playing an MP3 or MPEG file.


**Q9 The Taskbar on the bottom of the screen does not appear when a projector is used as the display device.**

**A**     This occurs because, while WSXGA+ LCD supports 1680x1050 mode, the projector does not support this mode. In this case change the resolution to 1024x768 (recommended) on your computer.


**Q10 When a TV is connected, the Turn off monitor power option is not performed.**

**A**     When connecting a TV after booting up your computer, the Turn off monitor power option may not be performed. For it to operate properly, it is recommended to connect a TV and then booting up the computer.


**Q11 No picture is displayed on the screen when I separate the LCD in Standby or Hibernation mode and connect an external monitor.**

**A**     The signal output of the computer is still set to the LCD, which is the setting of the computer before the computer enters Standby or Hibernation mode.

To use an external monitor, press the <**Fn**>+<**F4**> keys to switch video output to the external monitor.


**Q12 There is no picture on the screen when I open the LCD Separation Latches.**

**A**     When the LCD Separation Latches are released, the LCD power is interrupted to protect the LCD module. Once the LCD power is interrupted, no picture is displayed on the screen even if you reinstall the LCD module. In this case, press <**Fn**>+<**F4**> to set the signal output to the external monitor.


**Q13 I cannot find the shortcut icons on the screen. (e.g. the Brightness Adjust Icon)**

**A**     Select **Start > All Programs > Samsung > Samsung Display Manager > Samsung Display Manager**.

# Sound Related

**Q1 How to install and uninstall the sound driver**

**A** To install or uninstall the sound driver from this system, please follow the procedures below.

- **Sound Driver Components**

  The sound driver consists of the following 3 components and the 3 components are automatically installed during the installation.

  – **High Definition Audio - KB888111:** Microsoft UAA Bus Driver for High Definition Audio

  – **SoundMAX:** SoundMAX Integrated Digital HD Audio

  – **WOW XT and TSXT Filter Driver:** SRS

- **Uninstalling the Sound Driver**

  To remove the sound driver due to a problem or for an update, follow the procedures below.

  If you do not follow the sequence below, the sound driver may not be removed or the reinstalled driver, or may not work properly.

  1. Select **Start > Control Panel > Add or Remove Programs**.

  2. Remove **WOW XT and TSXT Filter Driver** first.

  3. Remove **SoundMAX** and restart the computer.

  Do not remove the **High Definition Audio** item. Removing this item also removes the modem device driver.

  If you have removed this item, you need to install the modem device driver again.

- **Reinstalling the Sound Driver**

  The sound driver is included on the **System Software Media**.

  1. Insert the **System Software CD-ROM** into the CD-ROM drive.

  2. Select the Sound Driver on either **Standard Installation** or **Custom Installation**, then the 3 components of the sound driver are automatically installed.

- **Installing the Sound Driver after a Windows XP Reinstallation**

  If you install the sound driver after reinstalling Windows XP, the Add Hardware Wizard (Modem Device) window may appear during the sound driver installation. This happens because the **High Definition Audio - KB888111** Hotfix, which has been installed on your system, has changed the settings to search for both sound and modem devices. If you install the modem device, this message will not appear. If necessary, install the modem device together.

The number of the High Definition Audio - KB888111 Hotfix may differ if you have updated the Hotfix from the Microsoft web site.

## Modem Related

**Q1  I cannot hear the modem sound.**

**A1**  Check that the telephone line is properly connected to the modem.

**A2**  Check that the modem driver is installed properly.

1.  Click Start > Control Panel > Performance and Maintenance > System.

2.  Select Hardware tab > Device Manager > Modems in the System Properties window, and check if there is a yellow exclamation mark on the installed modem icon. If there is, delete the modem device driver and reinstall the driver, because the yellow exclamation mark represents a not properly installed driver.

3.  If there is no yellow exclamation mark, double-click the installed modem, and click Diagnostics tab > Query Modem in the Modem Properties window to diagnose the modem.

    No message in either of Command and Response in the Diagnostics tab means that the modem is not operating properly.

    Diagnose the modem again after restarting the system or reinstalling the driver.

    (You have to exit all programs using modem in the advance of diagnostics of the modem).

**A3**  Although I can make a connection with the modem, I cannot hear the dial tone and modem connection sound. In this case check the following list:

1.  Click Start > All Programs > Accessories > Entertainment > Volume Control.

2.   Clear the Mute check box in the Telephone Line item.
     (Depending on the sound driver, it may be displayed as another name such as
     Modem, Phone, Mono. If there is no corresponding item, click Options >
     Properties > Volume Control, select 'Playback', and select the 'Telephone Line'
     under the 'Display the following volume controls'. Click OK.)

**Q2   I cannot make a call using an extension line.**

**A**   In general, the dial tone of a PBX or a digital phone switching system is not a
     continuous one, unlike that of a trunk line.

     Therefore, the modem may not make a call because the modem mistakes the dial
     tone from a PBX or a digital phone switching system as a busy tone.

     In this case, complete the following procedures.

**- Using an AT command**

     As an initialization command, use the command, ATX3.

     Otherwise, enter the ATX3 command manually before making a call.

     It can correct this problem by skipping the dial tone check step.

**- Configuring the Modem through the Control Panel**

1.   Click Start > Control Panel > Network and Internet Connections.

2.   Under See Also, click Phone and Modem Options.

3.   In the Modems tab, select the installed modem, and click Properties.

4.   In the Modem tab of the Modem Properties window, clear the 'Wait for dial tone
     before dialing' check box.

5.   When the configuration is completed, click OK.

**Q3   How do I use my modem when dialing from overseas?**

**A1**  Check that the modem is correctly configured according to the current country.
     Because the values for communication may differ according to the country, you
     may not be able to connect via the modem due to an incorrect modem
     configuration.

1.   Click Start > Control Panel > Network and Internet Connections.

2.   Under See Also, click Phone and Modem Options.

3.   In the Dialing Rules tab, click Edit.

4.   In the General tab in the Edit Location window, select the current country from
     the Country/region radio box, specify the Area code, and click OK.

**A2** Because the shape of the telephone plug may differ according to the country, you have to purchase and use the appropriate telephone plug for that particular country.

**Q4 How do I receive a fax while the system is in power saving mode (Rest mode)?**

**A** To receive a fax in Standby Mode, you have to set it up as follows.

1. The automatic fax reception function of the fax program needs to be activated. (For more information, refer to the corresponding fax program manual.)

2. Click Start > Control Panel > Network and Internet Connections.

3. Under See Also, click Phone and Modem Options.

4. In the Modems tab, select the installed modem, and click Properties.

5. In the Power Management tab of the Modem Properties window, select the "With this device, exit the computer from stand-by mode" item and then click OK.

   The above setting enables the modem to turn on the system and receive a fax when in power saving mode.

## Wired LAN Related

**Q1 <Wake On LAN> function**

**A** <Wake On LAN> is a function that activates the system in rest mode when a signal (such as ping or magic packet commands) arrives from network (wired LAN).

   **To use <Wake On LAN> function:**

1. Select My Network Places > View network connections from the Desktop.

2. Click the right button on the touchpad over Local Area Connection, and select Properties.

3. Click Configure, and select Power Management tab. Select 'Allow this device to bring the computer out of standby', then click OK. Restart the system.

   - If the system in rest mode is activated when there is no received signal, use the system after disabling <Wake On LAN> function.

   - Connecting wired LAN while using wireless LAN may not execute <Wake On LAN> function. Configure wireless LAN to 'Disable' to use <Wake On LAN> function.

1. Click on **My Network Place> View network connections** on the Desktop.

2. Right-click over **Wireless Network Connection** and select **Disable.**

**Q2** **When I connected 100Mbps wired LAN and the computer exits standby/ hibernate mode, a message informing 10Mbps wired LAN connection appears.**

**A** When the computer exits standby/hibernate mode, restoring the network takes about 3 seconds. When the network is restored, it operates in 100Mbps.

## Wireless LAN Related

**Q1** **The Wireless LAN device is operating properly, but I cannot connect to the Internet or to another computer.**

This is due to an incorrect configuration, or a configuration error. Check the following check lists:

**A1** If you are using a computer-to-computer (Ad Hoc) network connection, check that the name of the configured network (SSID) is correct. The network name (SSID) is case sensitive.

**A2** If you are using a network key (encryption key), you have to use the same network keys for an AP (Access Point) or a computer-to-computer network (Ad Hoc). The network key of the AP is configured in the AP management program. Ask your network administrator or AP manager for more detailed information.

**A3** Check that the device driver is properly installed. If the driver is not properly installed, you will find a yellow exclamation mark on the network icon by clicking Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager > Network adapters > Wireless LAN adapter. If there is a yellow exclamation mark, please reinstall the device driver with the system software Media.

**A4** Referring to A2 of Q3, Check that the network bridge configuration is correct.

**A5** To use the wireless LAN when the LCD is separated, you have to plug in the Wireless LAN Antenna Cap. Check if the Wireless LAN Antenna Cap is plugged in. p36

**Q2** **The signal strength is excellent, but I cannot connect to the network.**

Even if the signal strength is excellent, the network connection may not operate properly if the TCP/IP properties are not properly configured, or the network key (encryption key) is incorrect.

**A1** Check that the TCP/IP properties are configured properly. When you connect to an AP, click the Wireless Network Connection icon on the taskbar and select the Support tab. If the IP is not allocated properly, the IP address will be displayed as follows (e.g. 169.254.xxx.xxx).
If the network does not provide DHCP, you have to specify the correct IP address by asking your network administrator.
Even if the network provides DHCP, the server may not allocate an IP address to the client properly, and the client station cannot connect to the network.

**A2** Referring to A2 of Q1, check that the network key is correct.

**A3** Referring to Q4, check that AP is operating properly.

**Q3** **I cannot share an Internet connection.**

**A1** It may require some time to synchronize the computers to share an Internet connection after the Internet connection sharing configuration is completed. If you cannot share Internet connection even after a longer period, restart the computer.

**A2** Check if the connection between the network adapters is configured to bridge. If there is a configured bridge connection between the network adapters through the network configuration wizard, remove the network bridge, and reconfigure the Internet connection sharing.

A bridge connection is created when you ran Network Setup Wizard from the [Network Connections] window, and selected both the internal connection adapter and another adapter in the wizard.

**Q4** **I cannot connect to the AP.**

**Check the Computer Settings**

**A1** Verify whether the wireless LAN function of the computer is on by doing the following. If the wireless LAN function is off, turn it on.

- For Windows XP, verify that the wireless network connection has been set to "Enable" in Start > Control Panel > Network Connections.

- If there is a Wireless LAN On/Off button, check if the wireless LAN button is pressed.

**A2** Verify whether the same network key (encryption key) has been entered in both the AP and the computer.

The network key is an encryption key for encrypting data transmitted between the AP and the computer. It is recommended setting the network key manually.

**Check the AP Settings**

For the AP settings, refer to the User's Guide provided by the AP manufacturer.

**A3** Verify whether the environment is suitable for using a wireless LAN.

The use of a wireless LAN may be restricted according to the environment and distance. Obstacles such as walls or doors affect the use of a wireless LAN. Install the AP in a high and open space 50cm from the wall and far removed from any other radio signal sources.

**A4** Verify whether the AP is operating properly.

- When the AP is not operating normally, turn off the AP and after a short while turn it on again.

- Verify whether the AP's firmware is the most recent version. (Contact the AP manufacturer or the place where you purchased the AP for details of the AP firmware.)

**A5** Verify whether the AP has been properly connected to the network.

Verify whether the network is operating normally by connecting the wired network cable, which has been connected to the AP, to your computer.

**A6** Check the network key settings (encryption key).

When automatic code conversion (a passphrase function) has been selected and data communication is not functioning even with a normal wireless connection, it is recommended entering the network key (encryption key) manually.

**A7** Check the AP settings as follows. (The following is recommended for a standard environment and thus may differ according to the specific wireless network environment.)

- When several APs are present simultaneously, check the channel setting for each AP. When different APs are using nearby channels, interference may occur between electronic waves. Set the APs' channels further apart from each other. (Ex: Ch1, Ch5, Ch9, Ch13)

- When an AP's SSID (Service Set ID) option is set to "Hide", you cannot search for that AP on the computer. We recommend canceling the "Hide" option for an AP. The SSID is a name for distinguishing one wireless LAN from another wireless LAN.

- It is recommended using Long Preamble. Preamble is a signal for data transmission synchronization. Short Preamble may be supported by some types of APs but may cause compatibility problems.

- It is recommended using a static IP.

- Since static channel selection is more reliable than auto channel selection, it is recommended setting a static channel.

**Q5** **In the Windows XP 'Available wireless networks' window, the Wireless Network Connection is displayed as 'Not Available'.**

**A1** When there is a Wireless LAN button, ensure that the Wireless LAN button is turned on.

**A2** Check if there is additional program for a wireless LAN connection installed. Windows XP supports wireless LAN connections through the Wireless Zero Configuration (WZC) service. Therefore, an additional program for wireless LAN connection is not required, unless the network requires a specific program. However, installation of some wireless LAN related programs may sometimes disable the [View Available Wireless Networks] window supported by WZC service. Exit the wireless LAN related program then check whether the window is enabled.

**A3** Initialize the device driver.
Click Start > Control Panel > Performance and Maintenance > System > Hardware tab > Device Manager > Network adapters, and select the wireless LAN adapter. Right-click the network adaptor and select 'Disable'. Then right-click over the network adaptor and select 'Enable' after a short wait to check that the device is operating properly.

**A4** Right-click the My computer icon, and select Manage. When the Computer Management window appears, double-click Services and Applications on the left, and then click Services from the sub menu tree. Select the Standard tab in the right pane, double-click Wireless Zero Configuration and check that Startup Type is configured to Automatic, and the Service status is Started.

**A5** In the case of Windows XP, click Advanced in the [Wireless Network Connection] dialog box (see 'Connecting to an Access Point (AP)' (p80)) and make sure that 'Use Windows to configure my wireless network settings' is selected.

This may happen when a third-party wireless network setup program (e.g. PROSet) other than Windows XP default program is installed. For setting up a wireless network using the Windows XP program, this option should be selected.

**Q6    When connecting to a computer-to-computer (Ad Hoc) network, I cannot connect to another computer connected to the same computer-to-computer network.**

**A1**    Make sure that the security settings and network name of the computer-to-computer (Ad Hoc) network is correct.

**A2**    Check the TCP/IP properties of the computers to be connected through the computer-to-computer (Ad Hoc) network. All of the computers to be connected through a computer-to-computer (Ad Hoc) network should be configured so that their IP addresses are within the same subnet range.

- If the TCP/IP Settings are configured to DHCP, the address is automatically configured to an address within the subnet IP range. This will take about 2~3 minutes.

- If the IP address is configured to static IP in TCP/IP properties, select Use the following IP address in the TCP/IP properties of the wireless adapter, configure IP address:10.0.0.1~10.0.0.254, and Subnet mask: 255.255.0.0, and then try again.

- A fixed IP is recommended for a small-size network.

**Q7    When using a computer-to-computer (Ad Hoc) network, sometimes I cannot search the access point.**

**A**    It may happen occasionally when you are using a computer-to-computer (Ad Hoc) network connection. Even if you cannot find some access points, the computer-to-computer (Ad Hoc) network is operating properly. Click Refresh to view the latest search result.

**Q8    Running Help file while running Profile Wizard in the wireless LAN program (PROSet) makes the PROSet window white.**

**A**    It will be displayed properly when you finish the profile wizard. It dose not affect the program operation.

**Q9    The network does not operate properly when both the wireless and the wired network connections are simultaneously configured with the same IP address.**

**A**    You cannot use the wireless and the wired network connections using the same IP address simultaneously. To use either the wireless or the wired network in turn with the same IP address, you have to Disable whichever network device will not be using in the network connection of the Control Panel.

**Q10  The wireless LAN does not work properly when there is a device operating on an adjacent frequency in the vicinity of the product.**

**A1**  Channel interference may occur when a wireless video transceiver or a microwave oven is being used.If you experience channel interference from other equipment, it is recommended changing the channel to connect to the AP. For more information about AP settings, refer to the User Manual supplied by the AP manufacturer.

**A2**  IEEE802.11g equipment operates in hybrid mode when there is active IEEE802.11b equipment. This may result in data rate degradation.

**Q11  An established wireless LAN connection is disconnected after 2~3 minutes, and the connection is not recovered.**

**A1**  This may be caused by channel interference. Change the channel of the AP, and reconnect.

**A2**  This may be caused by selecting the 'Use IEEE 802.1x network authentication' option when IEEE 802.1x authentication is not available.

Check the properties of the AP in the wireless network settings. If the 'Use IEEE 802.1x authentication in this network' option is selected, deselect the option on the Authentication tab.

For more detailed information about authentication server, ask your network administrator.

**A3**  If the AP is configured to 'Use network authentication (Shared Key)'

If the AP is configured to authentication shared mode, all computers to be connected should be configured as follows:

- If you are using Windows XP, select network authentication(shared mode) in the wireless network settings.

Select Start > Control Panel > Network and Internet Connections > Network Connections, right-click the Wireless Network Connection icon and then select View Available Wireless Networks.
Select Change Advanced Settings from the left menu, select an AP from Preferred networks window in the Wireless Networks tab, and click the Properties button. Select Shared Mode in the Network Authentication field of the Association tab, and then click the OK button.

If the Preferred networks window in the Wireless Network tab is empty, click View Wireless Networks, select an AP to connect to, and select Shared Mode in the Network Authentication field of the Connection Information tab as described above.

For more detailed network authentication procedures, ask your AP (Access Point) administrator.

**Q12  After PROSet is installed, The "AEGIS Protocol (IEEE 802.1x) v2.2.1.0" appears in the [Local Area Connection Properties] window.**

**A**    The AEGIS Protocol is a security authentication protocol that is automatically installed when PROSet is installed and does not affect the operation of other programs.

**Q13  Although I have turned the wireless LAN off using the Off Button on the PROSet, the wireless LAN operating light is still on.**

**A**    This is normal. The Off Button for the Wireless LAN on the PROSet only turns off the S/W and not the H/W for the Wireless LAN.

**Q14  After installing the PROSet, I cannot manage the wireless network under Windows.(for an 11a/g and 11g card)**

**A**    Click on "Use Microsoft Client" in the Tools menu of the PROSet program to manage a wireless network in Windows.
To manage a wireless network in the PROSet program, click on "Use Inter PROSet/Wireless" in the Tools menu of the PROSet program.

**Q15  I cannot instantly switch the wireless LAN on or off using the hot key.**

**A**    This is normal. Switching the wireless function on or off takes approximate 5 seconds. Please select the function 5 seconds after the last switching operation.

## Games and Programs Related

**Q1   3D game is not executed, or some functions are not working.**

**A**    Change the graphic setting of the game to '2D' or 'Software Renderer', then execute the program again.

**Q2   I launched a game right after installing it, and the game is not executed.**

**A**    This problem may occur when the game is not compatible with Windows XP. Launch the game again, and it will be executed properly.

**Q3**   **While playing a 3D game, I tried to change display devices using <Fn> + <F4/▨|○> keys, then the system does not operate.**

**A**   When you use <Fn> + <F4 / ▨|○> keys while playing a 3D game, a system error may occur.
Do not use <Fn> + <F4 / ▨|○> keys while playing a 3D game.

**Q4**   **<Fn+F4/ ▨|○> Key combination does not work.**

**A**   While displaying video of VCD or MPEG, or the display setting is Dual View, you cannot toggle display devices. Also the installation of NetWare Client 32 program disables the function of <Fn+F4/ ▨|○>.

**Q5**   **While playing a game, pressing the <Fn>+<F4 /▨|○>keys does not work or the screen is not properly displayed.**

**A**   Some games and 3D application programs may change the display device control. Therefore, pressing the <Fn>+<F4 /▨|○> keys may terminate the running program or may display an abnormal screen.

Press the <Fn>+<F4 /▨|○> keys before launching a program and do not press them while running the program.

**Q6**   **Running speed of a game is too slow or fast.**

**A**   Change the setting of Power Schemes to 'Always On'.
(Click Start > Control Panel > Performance and Maintenance > Power Options > Power Schemes tab, then configure the Power schemes field to 'Always On'.)

**Q7**   **Pressing <Fn>+<F2/▭> keys while running a game may cause abnormal operation of the system.**

**A**   Do not press <Fn>+<F2/▭> keys while a game is running, because it may cause a system error.

**Q8**   **Some part of a game image is not displayed or is displayed in black.**

**A**   This may happen when running a game designed for DirectX 8.1, such as NHL 2003, MVP Baseball 2003, etc.

**Q9**   **The game screen is displayed small.**

**A**   This may happen when the display settings are set to zoom out mode ('Use center output'). Change the settings as follows to fit the game screen to the LCD screen.

1. Right-click over the Desktop and select **Properties** from the pop-up menu.
2. In the [Display Properties] window, select the **Settings** tab > **Advanced** > **GeForce Go 6600** tab.
3. Select the **nView Display Settings** item, set the nView mode to 'Single Display' and set the Current Display to 'Laptop Display'.
4. Right-click over the figure of the Digital Display Device and then click **Device Adjustments**.
5. Select 'Use Display Adapter Scaling' and then click the **Apply** button.

**Q10 The game play screen frequently stops and starts.**

**A** This may happen when the PowerMizer Settings are set to 'Maximum Power Saving Function' or 'Balanced'.

1. Right-click over the Desktop and select **Properties** from the pop-up menu.
2. In the [Display Properties] window, select the **Settings** tab > **Advanced** > **GeForce Go 6600**.
3. Select the PowerMizer item, slide the AC outlet and the battery sliders to Maximum Performance and then click the Apply button.

**Q11 Game play is not displayed smoothly on the screen.**

**A** For 3D games, the texture data for the 3D screen display is saved to the system memory. If there is insufficient system memory, the data is saved to the hard disk drive and loaded to memory when required. This operation may temporarily stop displaying the picture on the screen.

In this case, lower the game resolution or the screen settings. (For Delta Force: Black Hawk Down, Medal of Honor, Battle Field, 1942, etc.)

# Security Center

**Q1** **To change the popup window display settings when connected to the Internet.**

In the Windows XP SP2 environment, you can decide whether to display a popup window when connected to the Internet, for user convenience and security.

**A1** To display most of the popup windows when connected to the Internet:

1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.

2. In the Privacy tab of Internet Properties, clear Block pop-ups.

**A2** To display popup windows only from the current site when connected to the Internet:

Place the cursor on the notification area at the bottom of the Internet address bar and right-click to display a menu, from which you can select Temporarily Allow Pop-ups or Always Allow Pop-ups from This Site.

**A3** To display popup windows from a particular site:

1. Click on Internet Options in Start > Control Panel > Security Center > Manage security settings for.

2. In the Privacy tab of Internet Properties, click on Settings from Block pop-ups.

3. Enter a URL to want to allow pop-ups into Address of Web site to allow and click on Add.

4. You will find that the entered address is added to the allowed sites list. The next time you connect to the Web site, you will see pop-ups appearing.

When you need to re-block a permitted site, select the Web site address that you want to block from the Allowed Sites and click on Remove.

**Q2** **When you connect to a Web site, you see the message, "To help protect your security, Internet Explorer stopped this site from installing an ActiveX control on your computer" or "This site might require the following ActiveX control" below the address bar.**

**A** Windows XP SP2 blocks unsigned ActiveX controls from being installed when connected to certain Web sites for security reasons. On some Web sites that have no ActiveX controls installed, applications are not started or do not display properly.

In this case, to install ActiveX controls, right-click the notification area to display a menu from which you can select Install ActiveX control.

**Q3** **When you see a Windows Security Alert icon ( ) appear on the right part of the task bar.**

With the Security Center feature added, Windows XP SP2 checks the Firewall, the automatic updates configuration and installation of virus-checking programs to display a Windows Security Alert icon on the right part of the task bar when it judges that the computer is vulnerable to attacks from the Internet. In this case, check the following to install the necessary components.

**A1** Set up the Windows Firewall.
When you set up the Windows Firewall, you will be protected from unauthorized access through the Internet or the network.

1. Click on Windows Firewall in Start > Control Panel > Security Center > Manage security settings for.

2. From the General tab of Windows Firewall, select ON (recommended).

3. If you want to allow a certain program or service to gain access to your computer using the Firewall, select and check the program or service that you want to allow access from, in the Exceptions tab of the Windows Firewall. If you want to add a program to Programs and Services, click on Add Program and select it.

**A2** Set up Windows Automatic Updates.
This automatically downloads and installs critical updates via the Internet to keep your computer up to date.

1. Click on Automatic Updates in Start > Control Panel > Security Center > Manage security settings for.

2. From general tab of Automatic Updates window, select Automatic (recommended).

**A3** Keep your computer current with the latest virus updates. (ex: Norton Antivirus)
Even when you have installed Norton AntiVirus on your computer, Windows cannot recognize the program until you configure the settings, displaying a Security Alert icon.
When you first use or install Norton AntiVirus for the first time, follow the Registration Wizard steps to configure the registration settings.
To protect your computer from virus attacks with the latest updates, click on Options to display the Norton AntiVirus Options window. From the left menu of the window, check Run Automatic Protection to select Automatic Protection and check Run LiveUpdate to select LiveUpdate.

**A4** Two virus scanning programs on one computer may cause system conflicts.
Remove one of the programs from the system.

**A5**   If Windows does not recognize the existence of an anti-virus program even when it has been installed, your computer could be vulnerable to attacks from the Internet. You should install an anti-virus program that your computer is able to identify.

Check the following programs which Windows can detect and select one from the list.

A list of anti-virus programs that Windows can detect:

-Symantec Norton Anti-Virus

-NetworkAssociates (McAfee)

-TrendMicro

-ComputerAssociates

-Panda

-Kaspersky

-Ahnlabs (AhnLab)

> Visit the Microsoft Web site (www.microsoft.com) regularly to check the latest list.

## TV Related

**Q1**   **No picture is displayed on the TV screen.**

**A1**   Check if the **TV antenna** is properly connected. p47

**A2**   Check if the Country is properly set.

Click **Tools > Options > TV > Country Settings** from the menu bar of the AVStation premium TV and check if the country is properly selected. p47

The country selected in AVStation premium is also applied to AVStation now. If a problem occurs, check the Country settings in AVStation premium.

**A3**   Check if the TV input signal is set to **TV (air)** or **CATV (cable)**.

- For AVStation premium: p47

- For AVStation now: p70

**A4**   If an external video device is connected, check if the external video device is properly connected to the **AV In port**. p52

Check if the input signal is set to external input (**COMPOSITE** or **S-VIDEO**).

If you connect the S-Video cable directly to the AV IN port, no picture is displayed on the screen. Connect the S-Video cable connected to the external video device to the AV Input Dongle, and connect the AV Input Dongle to the AV IN port.

**Q2  The visual quality of the TV is poor.**

**A1**  This may happen when the TV radio signal in your location is too weak or the antenna connection is not good.

Connect the antenna cable to a normal TV and see if the visual quality improves.

**A2**  If you connect the system to a TV antenna distributor, the visual quality may be degraded.

Connect the antenna cable directly to the system without connecting the distributor.

# Restoring the System

This description is only for models running Window XP.

The System Restore function allows you to restore your computer to an earlier copy (called restore point), and restores the settings if a problem occurs.The System Restore function is provided by Windows XP to enable the resolution of various problems without reinstalling Windows XP completely.

You can use System Restore in the following cases.

- The system files are deleted or damaged by mistake.
- The system is unstable or a problem occurs in a device driver.
- A problem occurs after changing system files such as the registry.
- A problem occurs after installing a new program.

## Creating a Restore Point

Restore points are created at predetermined times and at times of significant system events such as when a program or a driver is installed. You can also decide when to create your own restore points.

There has to more than 200MB of free space on the hard disk drive. If the disk space is insufficient, a saved restore point might be deleted.

You are recommended to create a restore point when you have purchased a new computer and before installing new programs or device drivers. Before creating a restore point, check that the computer is operating properly.

The procedures to create your own restore point are described below.

1.  Click **Start** > **All Programs** > **Accessories** > **System Tools** > **System Restore**.

**2.** Select "Create a restore point", and click **Next**.
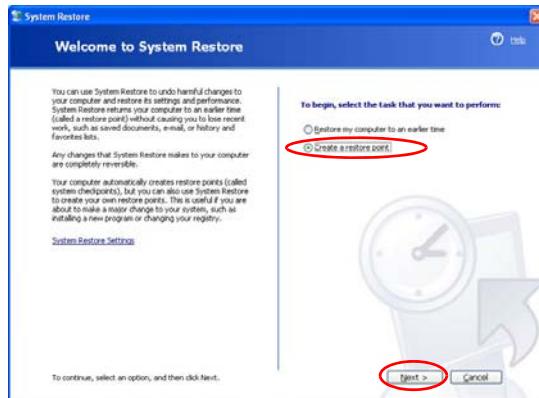


Since changes made after the Recovery Point may not be maintained, please back-up all necessary files to another location before performing system recovery.

**3.** In the Restore point description box, type a name to identify the restore point, and than click **Create**. A restore point has been created.

## Returning your computer to an earlier restore point

The procedures to return your computer to an earlier restore point when a problem has occurred are described below.

**1.** Click **Start > All Programs > Accessories > System Tools > System Restore**.

**2.** Select "Restore my computer to an earlier time", and then click **Next**.
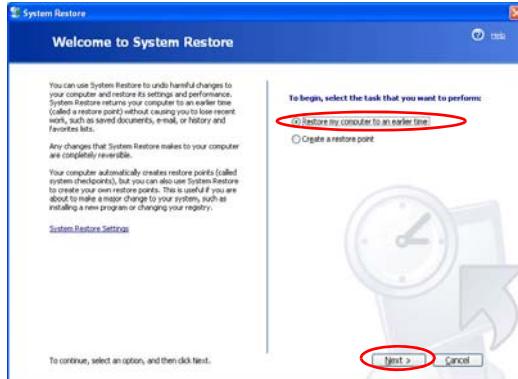
**3.** Select the desired restore date from the calendar restoration and select the desired restore point from the list, and then click **Next**.
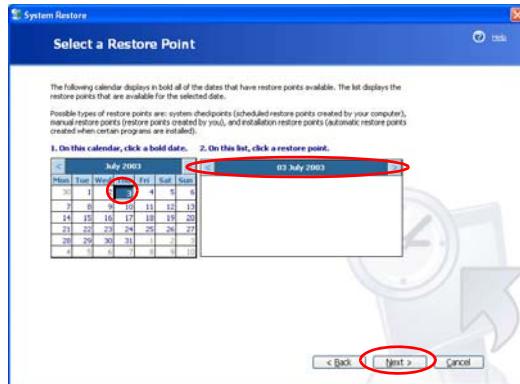


The date of the restore point is displayed in bold font.

**4.** Confirm the selected restore point and click **Next**. System Restore shuts down Windows, and starts the restoration processes.

**5.** After the restoration is complete, Windows restarts. In the [System Restore completed] dialog, click **OK**.Your computer has been restored to the selected restore point.

## Undoing the last restoration

The procedures to undo a restoration are described below.

**1.** Click **Start > All Programs > Accessories > System Tools > System Restore**.

**2.** Select "Undo my last restoration", and then click **Next**.

**3.** Confirm the restoration information to undo, and than click **Next**. System Restore shuts down Windows and starts undoing the restoration.

**4.** After the undo restoration is complete, Windows restarts. In the [Undo the last restoration completed] dialog, click **OK**.Your computer has been restored to the point prior to the last restoration.

# Reinstalling Software

If you have reinstalled the Windows operating system, or the system and program do not operate properly, you can re-install the driver and program using the system software Media.

> This computer is optimized for Microsoft Windows XP, therefore drivers for other operating systems are not included on the System Software Media.

## Running the system software Media

Insert the system software Media into the CD-ROM drive. The initial screen appears automatically.



- **Standard Installation**: This displays a list of drivers or programs that are not currently installed on your computer from the system software Media provided. All necessary components are installed using the factory defaults.

- **Minimum Installation**: This displays the components (driver, Windows programs, etc) that, if not installed, may cause problems with the system performance. You can install only required components.

- **Custom Installation**: You can customize the installation of drivers and programs.

## Installing drivers and programs

1. Click **Standard Installation** in the main window of the System Software Media. (Standard Installation is recommended)

2. The system is scanned to display the drivers and programs that need to be installed.

3. Click **OK**. The drivers and programs are automatically installed as factory defaults.
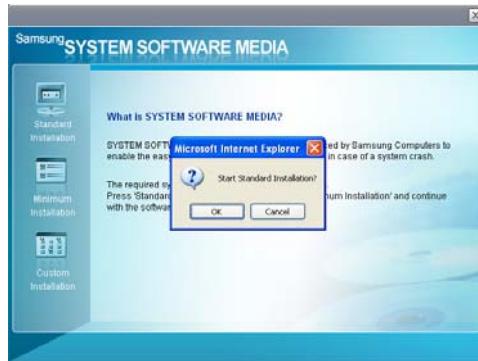


4. When done, restart the system.

# Reinstalling Windows XP

If the Windows XP does not operate properly due to an error in the system, or if you have replaced the hard disk drive, you can reinstall Windows XP using the system recovery CD.

With the system recovery CD, you can reinstall Windows XP only. To return the system to the state of shipment, reinstall the device drivers and programs with the system software Media after reinstalling Windows XP with the system recovery CD.

Reinstalling Window may delete the data on the hard disk drive such as files, programs, etc. In order to minimize damage from data loss, please remember to always back up data. Samsung Electronics is not liable in the case of data loss, please consult your warranty statement for clarification.

**When you have set a booting password**
You are asked to enter your booting password after restarting the system during the Windows installation. Enter the password to continue to the next steps.

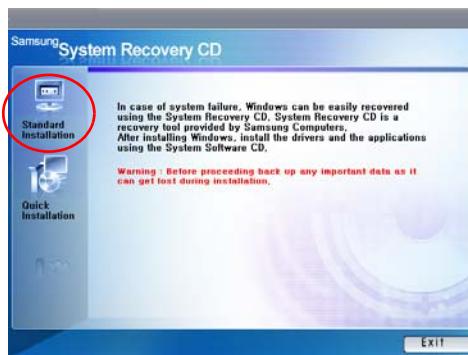## Reinstalling Windows

Explain Standard installation option as a standard.

1. Insert the system recovery CD into the CD-ROM drive.
2. In the initial screen, click **Standard Installation**.

- **Standard installation**: You can change the settings for partitioning, the installation folder, etc. during the Windows installation. However, reinstalling Windows may delete the data on the hard disk drive such as files, programs, etc. In order to minimize damage from data loss, please remember to always back up data.
- **Quick Installation**: This re-installs Windows with the user data and the system configuration intact. The user data in the already existing Windows folders may be preserved as the existing Windows folders are overwritten.

3. The description for the standard installation appears. Click **Yes**.
   The installation starts, and the system will be restarted after a while.

> When Quick Installation is selected,
> Setup proceeds with Step 3 before automatically installing Windows. Quick Installation overwrites the existing Windows version, so that drivers or applications do not need to be reinstalled.

4. After the system has restarted, the message 'Press any key to boot from CD' appears. Do not press any key at this time. After a while the partition configuration screen appears.
   To not change the partition, press **<Enter>**.

> **What is partition configuration?**
> Partition configuration is a function that devides the hard disk drive into one or several partitions. Note that changing the partition deletes all of the data on the hard disk drive.

5. Select the folder to install the Windows operating system.
   To delete the previous version of Windows and install in the current folder, press **<L>** on the keyboard.

> If you press ESC to select another folder for the installation, new Windows folders are created causing a risk of dual booting.

6. After the installation process copies the necessary folders for the Windows installation, restart the system, and the message "Press any key to boot from CD" is displayed. You do not need to enter anything. In a moment, the Windows XP installation screen will appear to proceed with the installation.

7. When **the Regional and Language Options** window appears, click **Next**.

8. When a window that requires your name and organization pops up, enter your name and the organization and click **Next**.
In the Windows XP Professional edition, an additional window that requires the computer name and the administrator password appears.
Enter **the computer name and the administrator password** and click **Next**.

9. When **the Date and Time Settings** window appears, click **Next**.
Setup will continue.

10. When the system restarts to display  Press any key to boot from CD, do not press any key.


When you see the Windows desktop, this means that the installation process is completed. Remove the system recovery CD and install **the device drivers and applications** from **the system software Media**.

## If You Cannot Run Windows

If you cannot run Windows, you have to boot the system with the system recovery CD, and reinstall Windows. If you boot the system from the system recovery CD, you can install Windows only with the user installation option. You cannot install with the standard installation option.

1. Insert the system recovery CD into the CD-ROM drive and start the computer.
2. If the following message appears on the screen, press any key from the keyboard.

> **Press any key to boot from CD.....**

This message appears only when the CD drive has booting priority. If the message does not appear, configure the CD drive as the first booting device referring to "Changing Booting Priority" on page 112.

3. Do not press any key at this time. After a while the partition configuration screen appears.
   To not change the partition, press **<Enter>**.
4. Select the desired file system ( format ).
   To maintain the current file system, press **<Enter>**.
5. Select the folder to install the Windows operating system.
   To delete the previous version of Windows and install in the current folder, press **<L>** on the keyboard.
6. After the installation process copies the necessary folders for the Windows installation, restart the system, and the message "Press any key to boot from CD" is displayed. You do not need to enter anything. In a moment, the Windows XP installation screen will appear to proceed with the installation.
7. Follow the instructions of the Windows XP installation wizard to continue with the installation.
8. When the installation is complete, the computer will restart.
   When the system has restarted, the Press any key to boot from CD message appears. Ignore the message.

The system boots and the Windows and Windows Registration screen appears. Register Windows, following the instructions to finish the Windows installation. Remove the System Recovery CD and install the **device drivers** and **application programs** using **Standard Installation** from the **System Software Media**.

# Specifications

## System Specification

The system specifications will be described below. The system specifications may differ depending on the derived models.

| Item | Specification | Remarks |
|------|---------------|---------|
| CPU | Intel Pentium M (Dothan) Processor (FSB 533MHz) | |
| Cache memory | Dothan 2MB | |
| Main memory | 512MB, Memory type : DDR2 SODIMM | Max 2GB |
| Main Chipset | Intel 915PM + ICH6M | |
| Hard disk drive (HDD) | 9.5mmH 2.5" HDD, 60GB / 80GB / 100GB (PATA & SATA 5400/7200rpm) | Optional |
| CD drive | DVD-Super Multi | |
| Graphics | Nvidia Geforce Go 6600 (NV43M), 64M/128M | Optional |
| Sound | High Definition Audio Codec AD1986A | |
| Network Interface | Modem: V.92<br>Wired LAN: Broadcom BCM5788 1G Ethernet UTP<br>Wireless LAN: 802.11BG or 802.11ABG<br>Bluetooth 1.2 | Optional<br>Optional |
| TV | NTSC/PAL/SECAM, Composite/S-Video Support | Optional |
| PCMCIA Slot | Type I and II Compatible | |
| Memory Card Slot | Memory Stick, Memory Stick Pro, SD Card, MMC, xD card Supported | |
| Ports | IEEE 1394 (6 Pin), USB2.0 x 4, Microphone, Headphone(S/PDIF supported), Modem(RJ-11), LAN(RJ-45), Monitor and TV Out(S-Video), TV Antenna (Optional), AV In (Optional) | |
| Dimensions (mm) | 434.9 x 320.3 x 48.5 | W x D x H |
| LCD Panel Size | 19" WSXGA+(1680 x 1050) | |
| Weight | 4.4Kg | |
| Battery | Lithium-Ion smart battery | |
| Operation Environment | Temperature (storage) : -5 ~ 40°C   (operation) : 10 ~ 32° C<br>Humidity (storage) : 5% ~ 90%        (operation) : 20% ~ 80% | |
| Operation Voltage | 100 - 240 VAC | |
| Frequency | 50 - 60 Hz | |
| Output Power | 90W | |
| Output Voltage | 19.0VDC | |

The system specifications are subject to change without notice. For detailed system specifications, refer to the product catalog.

The capacity of the hard disk drive with Samsung Recovery Solution will be displayed as less than the specified capacity.

# Wireless LAN Specification (Optional)

## Intel(R) PRO/Wireless 2200BG Network Connection

*Product Specification*

| Item | | Detailed Specifications |
|---|---|---|
| **Physical Specifications** | Dimensions | (Width X Height) 59.75 X 44.45 mm |
| | operation temperature and humidity | Same as system operation |
| | | Temperature: 0°C ~ 70°C<br>Humidity: less than 85% |
| **Power Specification** | Power Saving Mode | 135 mW |
| | Receiving Mode | 0.85W |
| | Transmission Mode | 1.45W |
| | Power | 3.3V |
| **Network Specifications** | Compatibility | IEEE 802.11b, IEEE 802.11g |
| | Operating System | Microsoft Windows XP<br>- NDIS5 Miniport Driver |
| | Media Access Protocol | CSMA/CA (Collision Avoidance) with Acknowledgement(ACK) |
| | Security | Wired Equivalent Privacy support (WEP) 64bit/128bit WPA*, CCX* |

* This piece of equipment supports the Wi-Fi wireless LAN security standard, WPA (Wi-Fi Protected Access) and CCX (Cisco Compatible eXtensions). To connect to a wireless network consisting of the WPA and CCX, certificates or PROSet may be required depending on the network settings. For driver update, visit www.samsung.com and for information on the PROSet installation, refer to 'Wireless Network Setup Using the Wireless LAN Setup Program' (p85). For more information, ask your network administrator.

*Radio Specifications*

| | |
|---|---|
| RF Band | 2.4GHz |
| Support Channels | Channels allowed per country. |
| Device | Transceiver |
| Standard Output Power | 5 mW |
| Transmission Method | 11b mode: DSSS<br>11g mode: OFDM |
| Transmission Rate (Mbps) * | 11b mode: 11, 5.5, 2, and 1<br>11g mode** : 54, 48, 36, 24, 18, 12, 9, and 6 |
| Antenna Type | Internal Antenna 2 EA (Main/Aux) |

* The transmission rate may differ from the actual transmission rate.
** 11g mode is supported only when the device is connected with an IEEE802.11g device (e.g. IEEE802.11g compatible Access Point).

# Intel(R) PRO/Wireless 2915ABG Network Connection

## *Product Specification*

| Item | | Detailed Specifications |
|---|---|---|
| **Physical Specifications** | Dimensions | (Width X Height) 59.75 X 44.45 mm |
| | operation temperature and humidity | Same as system operation |
| | | Temperature: 0°C ~ 70°C Humidity: less than 85% |
| **Power Specification** | Power Saving Mode | 135 mW |
| | Receiving Mode | 0.85 W |
| | Transmission Mode | 1.45 W |
| | Power | 3.3V |
| **Network Specifications** | Compatibility | IEEE802.11a, IEEE802.11b, IEEE802.11g |
| | Operating System | Microsoft Windows XP - NDIS5 Miniport Driver |
| | Media Access Protocol | CSMA/CA (Collision Avoidance) with Acknowledgement(ACK) |
| | Security | Wired Equivalent Privacy support (WEP) 64bit / 128bit WPA*, CCX* |

* This piece of equipment supports the Wi-Fi wireless LAN security standard, WPA (Wi-Fi Protected Access) and CCX (Cisco Compatible eXtensions). To connect to a wireless network consisting of the WPA and CCX, certificates or PROSet may be required depending on the network settings. For driver update, visit www.samsung.com and for information on the PROSet installation, refer to 'Wireless Network Setup Using the Wireless LAN Setup Program' (p85). For more information, ask your network administrator.

## *Radio Specifications*

| | |
|---|---|
| RF Band | 2.4GHz, 5GHz |
| Support Channels | Channels allowed per country. |
| Device | Transceiver |
| Standard Output Power | 5 mW |
| Transmission Method | 11a mode: OFDM 11b mode: DSSS 11g mode: OFDM |
| Transmission Rate (Mbps) * | 11a mode** 11b mode: 11, 5.5, 2, and 1 11g mode*** : 54, 48, 36, 24, 18, 12, 9, and 6 |
| Antenna Type | Internal Antenna 2 EA (Main/Aux) |

* The transmission rate may differ from the actual transmission rate.
** 11a mode is supported only when the device is connected with an IEEE802.11a device (e.g. IEEE802.11a compatible Access Point).
***11g mode is supported only when you are connected to an IEEE 802.11g device (e.g. An Access Point supporting IEEE 802.11g).

# Abbreviations

**A** . . . . . . . . . Amperes

**AC** . . . . . . . . Alternating current

**ACPI** . . . . . . Advanced Configuration and Power management Interface

**APM** . . . . . . Advanced Power Management

**ATA** . . . . . . . AT attachment (refers to the hard-drive interface in an AT-compatible computer)

**ATAPI** . . . . . AT attachment packet interface

**BBS** . . . . . . . Bulletin board system

**BIOS** . . . . . . Basic input/output system

**C** . . . . . . . . . Centigrade

**CD** . . . . . . . . Compact disc

**CD-ROM** . . Compact disc read-only memory

**cm** . . . . . . . . Centimeters

**COM** . . . . . . Communication (as in communication port)

**CMOS** . . . . . Complementary metal-oxide semiconductor

**DC** . . . . . . . . Direct current

**DMA** . . . . . . Direct memory access

**DPMS** . . . . . Display power-management signaling

**DRAM** . . . . . Dynamic random access memory

**DSTN** . . . . . Double layer super twist nematic

**ECP** . . . . . . . Extended capabilities port

**EPP** . . . . . . . Enhanced parallel port

**g** . . . . . . . . . . gram

**G** . . . . . . . . . Gravity

**GB** . . . . . . . . Gigabytes

**hr** . . . . . . . . . hour

**Hz** . . . . . . . . Hertz

**IDE** . . . . . . . Integrated drive electronics

**I/O** . . . . . . . . Input/output

**IRQ** . . . . . . . Interrupt request line

**ISA** . . . . . . . Industry Standard Architecture

**KB** . . . . . . . Kilobytes

**kg** . . . . . . . . Kilograms

**LAN** . . . . . . Local-area network

**lb.** . . . . . . . . Pounds

**LBA** . . . . . . Logical block addressing

**LCD** . . . . . . Liquid-crystal display

**m** . . . . . . . . Meters

**mA** . . . . . . . Milliampere

**mAhr** . . . . . Milliampere hour

**MB** . . . . . . . Megabyte

**mm** . . . . . . . millimeter

**MPEG** . . . . . Motion Picture Experts Group

**MPU** . . . . . . Microprocessor unit

**ms** . . . . . . . . Millisecond

**PDF** . . . . . . Portable document format

**PC** . . . . . . . Personal computer

**PCI** . . . . . . Peripheral component interconnect

**PCMCIA** . . . Personal Computer Memory Card International Association

**POST** . . . . . Power-on self-test

**PNP** . . . . . . Plug and play

**PS/2** . . . . . . Personal System/2

**RAM** . . . . . . Random-access memory

**ROM** . . . . . Read-only memory

**SVGA** . . . . . Super video graphics array

**TFT** . . . . . . Thin-film transistor

**USB** . . . . . . Universal serial bus

**V** . . . . . . . . Volt

**VAC** . . . . . . Voltage alternating current

**VCC** . . . . . . Voltage collector current

**VDC** . . . . . . Voltage direct current

**whr** . . . . . . Watt hour

# Glossary

**AC adapter**
The AC (or alternating current) adapter regulates current coming into your computer from the wall outlet. The current at the wall outlet is alternating current and needs to be changed by the adapter to DC (direct current) before your computer can use it for power.

**ACPI**
ACPI (Advanced Configuration and Power Interface)- a method for describing hardware interfaces in terms abstract enough to allow flexible and innovative hardware implementations and concrete enough to allow shrink-wrap OS code to use such hardware interfaces.

**BIOS**
BIOS stands for basic input/output system. The BIOS is software (often called firmware) that is independent of any operating system. It enables the computer to communicate with the screen, keyboard, and other peripheral devices without using programs on the hard disk.
The BIOS on your computer is flash BIOS, which means that it has been recorded on a flash memory chip that can be updated if needed.

**Boot**
To start your computer. A cold boot resets the entire computer and runs through all computer self-tests. A warm boot clears out computer memory only.

**Boot disk**
A disk containing operating system programs required to start your computer. A boot disk can be a floppy disk, hard drive, or compact disc.

**Byte**
The basic unit of measure for computer memory. A character—such as a letter of the alphabet—uses one byte of memory. Computer memory is often measured in kilobytes (1,024 bytes) or megabytes (1,048,576 bytes).
Each byte is made up of eight bits. For more information on bytes and bits, see an introductory book on computers.

**Cache memory**
Cache is very fast, zero-wait-state memory located between the microprocessor and main memory. Cache reduces the average time required by the microprocessor to get the data it needs from the main memory by storing recently accessed data in the cache.

**CardBus**

CardBus technology enables the computer to use 32-bit PC Cards. Hardware in the computer and the Windows operating system provide support for the 32-bit cards. The voltage of 32-bit cards (3.3 volts) is lower than that of 16-bit cards (5 volts). The 32-bit cards can transmit more data at a time than the 16-bit cards, thus increasing their speed.

**CMOS memory**

CMOS (complementary metal oxide semiconductor) memory is powered by the CMOS battery. The System Setup settings and other parameters are maintained in CMOS memory. Even when you turn your computer off, the information in CMOS memory is saved.

**COM port**

COM stands for communication. COM ports are the serial ports in your computer.

**Compact Disc**

A compact disc (CD).

**Conventional memory**

The first 640 KB of system memory. Operating systems and application programs can directly access this memory without using memory-management software.

**Disk**

The device used by the computer to store and retrieve information. *Disk* can refer to a floppy disk, hard disk, or RAM disk.

**Disk cache**

A software device that accumulates copies of recently used disk sectors in RAM. The application program can then read these copies without accessing the disk. This, in turn, speeds up the performance of the application.

A cache is a buffer for transferring disk sectors in and out of RAM. Data stored in a disk cache is a copy of data already stored on the physical disk.

**DMA (direct memory access)**

A method of transferring data from a device to memory without having the data pass through the microprocessor. Using DMA can speed up system performance.

**DPMS**

Display Power Management Signalling. Displays or monitors that comply with this can be managed by the Power Management features found in the system setup.

**Floppy disk**

A removable disk, also called *floppy* or *diskette*.

**Hard drive**

Also called *fixed* disk. A hard drive is connected to the computer and can be installed or removed. Data written to a hard drive remains until it is overwritten or corrupted.

The 2.5-inch hard drive in your computer was designed for use in a notebook computer. Because hard drives in notebook computers are smaller than those in desktop computers, their maximum storage capacity may be less than that of desktop hard drives. However, because of their smaller size, the drives handle shock and vibration better than larger drives, which is important for a notebook computer.

**I/O**

Input/output. Refers to peripheral devices, such as printers, that are addressed through an I/O address.

**I/O address**

I/O stands for input/output. Peripheral devices, such as printers, are addressed through the I/O port address.

**IRQ (interrupt request line)**

The IRQ is a hardware line that a device uses to signal the microprocessor when the device needs the microprocessor's services. The number of IRQs is limited by industry standards.

**LCD (liquid-crystal display)**

The LCD screen on your computer differs from the display screen of a desktop monitor. Most desktop monitors use CRT (cathode-ray tube) displays, which work by moving an electron beam across phosphor dots on the back of the screen. The phosphor dots light up to show the image. LCDs use a liquid-crystal solution between two sheets of polarizing material. Electric current passing through the liquid aligns the crystals so that light can or cannot pass through them, creating an image.

**MB (megabyte)**

1,024 kilobytes.

**Megabit**

1,048,576 bits or about 128 kilobytes.

**Operating system**

A program that supervises the computer's operation, including handling I/O. Application programs and users can request operating-system services. A user might request operation-system services to copy files or format a disk. An application program might use the operating system to obtain keyboard input, write data to a file, or write data to a screen.

**PC Card**

PC Card stands for personal computer card. The Personal Computer Memory Card International Association (PCMCIA) defines the standards used to develop all PC Cards. PC Card types include: modems, Ethernet adapters, SCSI adapters, ATA cards, and memory cards.

**PC slot**

The PC slot is the hardware slot in the computer where the PC Card is placed.

**Pixel**

A pixel is an individual dot in a graphic displayed on your computer. The pixels are so close together that they look as though they are connected. An LCD screen displays thousands or millions of pixels.

**Plug and Play**

A plug and play operating system automatically configures computer components to work with your system. With this type of operating system, you normally do not need to set jumpers on devices or set memory addresses or IRQs.

**RAM (random access memory)**

The computer's system memory, including conventional and extended memory. You can write to and read from RAM. Information stored in RAM is temporary, and is erased when the system is turned off.

**Refresh rate**

The refresh rate is the rate at which the image on the LCD screen is rewritten to the screen. A fast refresh rate helps keep the image from flickering.

**Resolution**

The resolution is the sharpness or clarity of the image on your LCD screen. Resolution is measured by the number of pixels the computer's screen can display. For example, a resolution of 800 x 600 means that the screen can display 800 pixels in row and can display 600 rows. The more pixels displayed, the higher the resolution and the better the image.

**ROM (read-only memory)**

Permanent computer memory dedicated to a particular function. For example, the instructions for starting the computer when you first turn on power are contained in ROM. You cannot write to ROM. (ROM is not the same as RAM).

**Sector**

Also known as *disk sector*. The portion of a track that is numbered and can hold a specified number of characters (usually 512 KB).

**Shadow RAM**
A write-protected area of RAM that contains a copy of the BIOS. As the computer boots, the BIOS is copied from its permanent location in ROM to RAM. The BIOS can be executed much faster in RAM than in ROM. The BIOS remains in shadow RAM until you turn off the computer.

**TFT (thin film transistor) LCD**
A TFT LCD uses a separate transistor circuit to control each pixel. This technology provides the best resolution for an LCD screen. A TFT LCD is also sometimes called an active matrix LCD.

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